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ABSTRACT

This report provides an overview of the competency-based education movement, discusses school administrators' concerns and attitudes concerning the competency movement, describes the experience of various school districts and states with minimum competency requirements, and presents practical guidelines for implementing minimum competency requirements. Various chapters focus in turn on 1) what the competency movement is; 2) what school administrators think about the competency movement, based on results of a national survey; 3) what pressures are behind the competency movement; 4) how the competency movement relates to declining test scores, educational finance, student achievement, dropout rates, social changes, and the National Assessment of Educational Progress; 5) how the competency movement is affecting different states and school districts; 6) what to consider in implementing minimum competency requirements, and 7) how minimum competency requirements relate to the back-to-basics movement. (JG)

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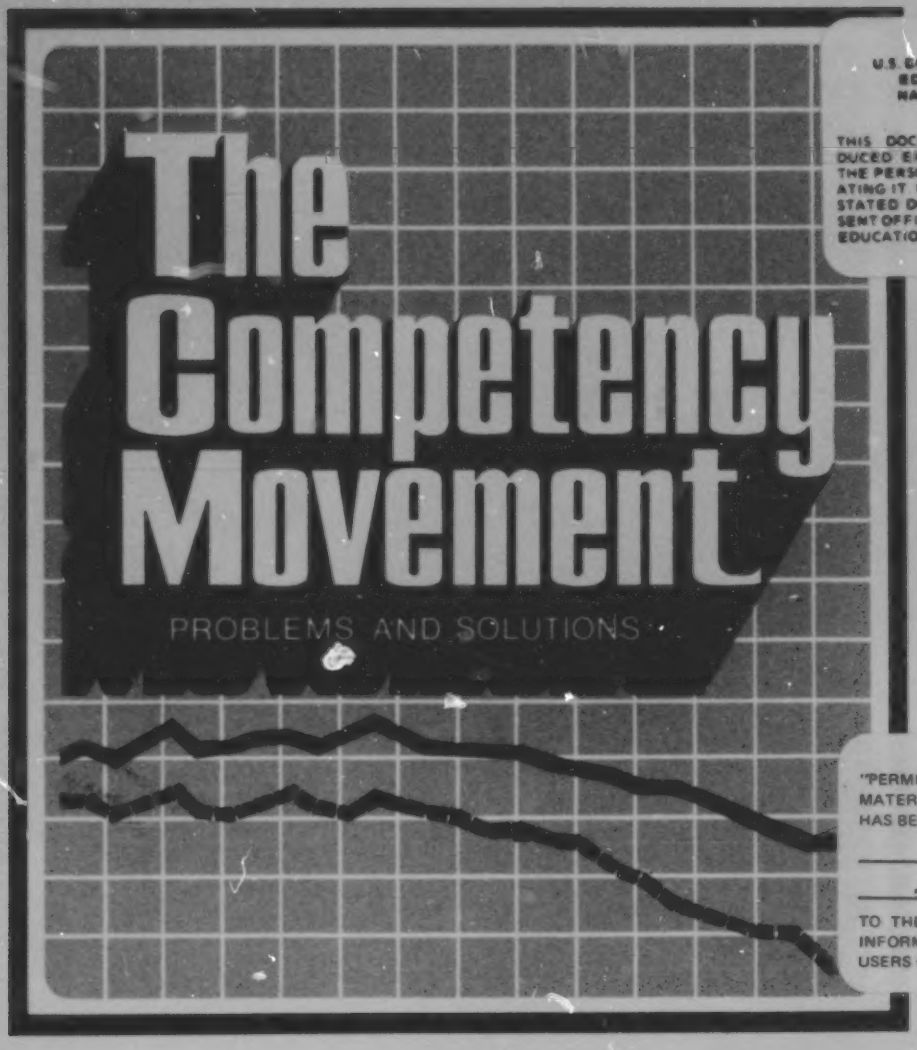

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The AASA Critical Issues Series

Many of the critical issues facing schools today are controversial. Some are new. None has a single best answer. Yet, administrators and boards must determine what is best for their communities. Realizing this, the American Association of School Administrators saw the need for a new series of in-depth reports to help administrators and boards. The series was initiated by AASA's Office of Information and Publications.

This is the second report in the **AASA Critical Issues Series.** Like those to follow, this report provides an in-depth analysis of the root causes and possible answers to a critical school problem. It also offers "how-to" advice, tips and guidelines, the heart of the series. Our thanks to all those who helped by providing information, technical advice and reviewing time.

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Overview

The minimum competency movement could be the major school reform of the 20th century. It's been called that. More cautious observers deem it "a potential tool for fundamental school reform." Critics call it the "Great American Education Fad of the 1970s."

But whatever it turns out to be, the movement has already brought education into the headlines more than any topic since the passage of the Elementary and Secondary Education Act of 1965. ESEA focused attention on disadvantaged students.

Similarly, the competency movement is an attempt to give all students a chance to succeed in school — and in life. But, the students most affected are disadvantaged youth and those who are unmotivated to learn.

Legislators and policy makers in almost every state have taken action or are studying how to guarantee that students will emerge from schools equipped with minimum proficiency in basic skills. Some of the actions require that students be able to read, write and compute, generally at the eighth grade level, before receiving a high school diploma. Others require that students become proficient in solving everyday problems that adults face. To illustrate: Instead of asking students to add and subtract columns of figures correctly, students would be asked to balance a checkbook, an everyday "survival" or "life" skill.

The rational behind legislation on required competencies seems to be this: Requiring states or local school districts to set minimum standards of performance and to test student proficiency in meeting those standards will result in more competent students.

Oregon, the first state to become involved in the competency movement, offers an example of fundamental school reform, attempted through use of a competency based system. The State Board of Education requires all schools to set goals for elementary and secondary education. Failure to do so could result in loss of state aid. The intent is to ensure that schools will make available to students the opportunity to learn to function effectively in six life roles. They are: individual, learner, producer, citizen, consumer and family member. The Oregon board requires all districts to assess how well students can read, write and compute. It also asks them to devise policies in new graduation requirements, starting in 1978. Districts must identify the minimum competencies needed for a diploma.

Other states, such as Florida and New York, have introduced new tests which help determine whether a student graduates with a diploma or a certificate of attendance. Florida introduced a functional literacy test in October 1977. A passing score of 70% is required both in communication and math. In the first administration of the test, one-third to one-half of the students in several districts failed math. Officials estimated that 5 to 7% of the students would still be unable to pass it after being given three chances.

Students in New York must make a minimum score of 65% on five new basic competency tests administered statewide in reading, mathematics, practical sciences and health, civics and citizenship, and writing skills. Otherwise, they cannot receive a diploma, starting in 1980.

Other states are taking different routes to guarantee minimum performance in basic skills. "There is almost universal acceptance of the need for the concept, but only minimal agreement on how best to attack the problem," says Chris Pipho, associate director of the Dept. of Research and Information for the Education Commission of the States. He maintains it would take daily bulletins to keep up with the frenzied activity characterizing the movement.

At the local level, the Denver Public Schools developed and started to use minimum competency tests in 1960 to assure that students are proficient in reading, language, spelling and math. Only about 1.5% of students in the district fail to receive a diploma because they cannot pass the tests. By comparison, the failure rate for Denver students who have taken the test only once or twice is 20 to 35%. Students have eight chances to pass.

Other districts have established new policies which do not allow students to be promoted to a higher grade until necessary skills or competencies are mastered. Both California and Florida allow students to leave school early by taking a form of proficiency test. Students who pass receive the equivalent of a high school diploma and are permitted to bypass other graduation requirements.

The flurry of activity at the state and local level led some legislators to propose that national standards be set for minimum competency. The proposals received little support from educators and federal officials, despite the insistence of one legislator that "parents want schools to get back to the basics, and this is one way to do it."

Administrators responding to the **Critical Issues** survey for this report view the movement in various ways. Some call it "another swing of the pendulum." Others welcome the movement and consider it an impetus for examination, renewal and reform. But to many administrators, the competency movement represents overreaction to reports of declining test scores by legislators, parents and the public.

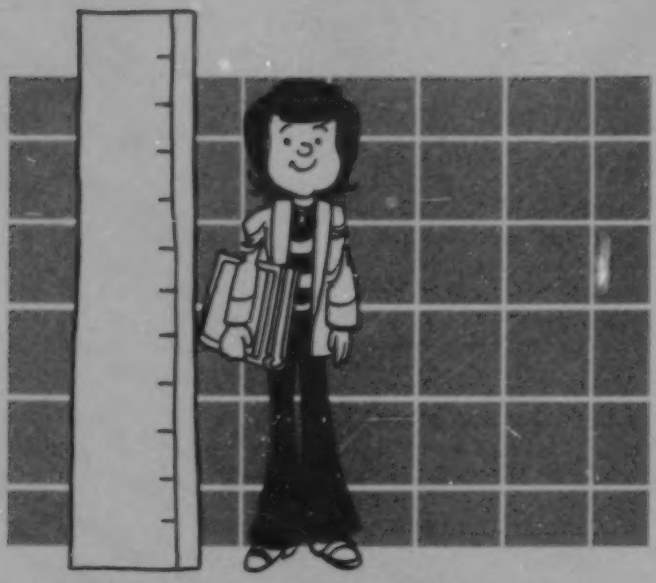
In the **Critical Issues** survey, administrators cited hundreds of specific concerns in five general categories:

- Who is to be held accountable?
- The logistics of implementing the requirements.
- Fear that the curriculum will be narrowed, with courses other than those emphasizing basic skills receiving less attention.
- How to meet the needs of all students.
- The threat to local control of the curriculum and graduation requirements.

This report offers case studies of how various districts and states are implementing minimum competency requirements and advice from those involved in the action. The best advice may be that of a superintendent who sees both positive and negative results. "This," he says, "is our opportunity to strengthen programs and teaching strategies and, in the process, students cannot help but make gains."

CHAPTER I

What Is the Competency Movement?



The competency movement is not something new. Its roots are evident in ancient history. About 2,000 years ago, attempts were made to cultivate competency in oratory. In primitive societies, the training of youth was clearly directed toward making them competent in survival skills. Medicine, dentistry, nursing, law, engineering and education all have aimed at making practitioners proficient in their professions. In various fields, tests have been used for entrance, passage from one level to another and certification of competency or proficiency prior to graduation.

The forerunners of the current movement to use standards to judge student competency appeared more than 100 years ago. Starting in 1865, teachers in New York developed tests to determine the competence of individual students in particular areas of study. The tests, known as the Regents Exams, are available in 25 subject areas. They are used to award Regents diplomas and to measure the performance of local school districts.

One form of competency testing — the GED (tests of General Educational Development) — has been used since 1942 to enable persons over 18 and out of school to receive a high school equivalency diploma. GED tests measure ability to read and mastery of basic skills, especially in areas of mathematics, writing and interpretation of charts and graphs. The tests, written at the ninth grade level, are not considered easy. In fact, a GED diploma reportedly has more credence with some employers than a high school diploma.

Employers complain that youth with a high school diploma do not seem able to read, write or do math anymore. Parents, legislators and other citizens echo their complaints. They cite statistics on declining test scores to reinforce demands that schools go "back to the basics."

Many educators counter by saying that schools can't go back because they never left the basics. Nevertheless, legislators and state boards of education have reacted by demanding that students meet minimum standards prior to being awarded a diploma and, in some cases, prior to being promoted to a higher grade.

Educators themselves have endorsed changes in high school graduation requirements. Their recommendations reflect a belief that the diploma should signify more than "seat time" or attendance for a specified number of years.

For example, a task force of the National Association of Secondary School Principals said a diploma should certify that a graduate possesses "baseline skills and knowledge essential to an effective adult citizen." The requirements for a diploma, the task force said, should include:

- The ability to read, write and compute with specified proficiency.
- An acquaintanceship with the American experience.
- An understanding of the process and structure of democratic governance.
- The successful completion of a series of courses or planned experiences.

The task force said the requirements should be verified by competency measures used to determine functional literacy, ability to compute and knowledge of the history and culture of the United States.

Some critics believe the competency movement reflects a new conservatism sweeping the country. Others think the schools have been made the scapegoat for all the ills of society, particularly changes since the 1960s. Another view is that legislators are expressing their frustration and failure to get at the education system through any other means of accountability.

A Form of Accountability

Accountability has been attempted — or at least talked about — in education since the 1960s. By late 1972, 23 states had passed legislation or joint resolutions featuring some aspect of accountability. The mandates, although diverse, require setting goals for education and for making someone accountable for reaching those goals. The competency movement uses some of the same language, specifies the setting of goals and holds schools accountable for pro-

viding the means to enable students to reach district or state goals.

Generally, the overall goal expressed in recent mandates is to assure that students reach a minimum level of competency in the basic skills at certain grade levels and prior to being awarded a high school diploma. Most of the mandates specify that student competency or proficiency should be assessed through testing at certain grades in the required basic skills. The mandates specify the use of either statewide or locally developed tests and standards.

The mandates focus almost exclusively on the basic skills or three R's. Some require students to perform "academic" functions at a specified level of proficiency. Examples: multiply 2 × 4; write a paragraph using correct spelling, grammar and punctuation; read with at least minimum understanding of vocabulary and comprehension. Other state and local mandates require students to apply the basic skills. Instead of multiplying 2 × 4, for example, students would have to apply their knowledge or skill. A typical problem might ask them to find how much material would be needed to cover a window measuring 2 feet by 4 feet.

Another option used by some states and local districts is to define and require minimum competencies in "survival" or "life skills." They require the application of basic skills to the kinds of problems adults might encounter in daily living. Examples: filling out an application for a driver's license, figuring out the lowest cost per pound of a specified product or writing a business letter.

What Should Be Required?

There is little agreement on whether to require proficiency in academic, applied or survival skills. If students cannot perform basic functions, they cannot apply them. On the other hand, students may be motivated to learn basic skills if they must learn application or see how basic skills relate to everyday life. Reaching consensus on what constitutes survival skills is difficult. Some educators say the term, survival skills, is meaningless. They point out that illiterates survive and that "no one ever died due to not being competent in math." And, critics say, the skills needed for survival today may change tomorrow.

The Denver Public Schools, the district with the most experience in using minimum competency testing, assesses basic skills in reading, writing and arithmetic in academic fashion. It does not include questions testing survival skills. Florida, on the other hand, requires students to be able to perform survival skills like balancing a checkbook. Such skills comprise a functional literacy test that students must pass to graduate.

Results from the **Critical Issues** survey conducted for this report disclose that minimum competency tests are being used for these purposes:

- To ensure that pupils are able to perform some minimum set of skills before receiving a high school diploma.
- To ensure that promotion from grade to grade is based on proof that students have mastered a specified level of performance in reading, for example.
- To offer credit to students who can show they are able to perform at a predetermined level without going through a traditional course.
- To identify students not performing at minimum levels and to require school districts to provide compensatory programs for those students.
- To use the results of tests to direct state or local aid toward those districts, schools or students showing poorest performances.

Support and Opposition

Support for the establishment of minimum competency standards comes from many sources. As one example, 60% of the school board members responding to a query from the National School Boards Association said proficiency tests should be required for high school graduation. They said students should demonstrate their ability to read at least at an eighth grade level before receiving a diploma.

The National Council of Teachers of English, on the other hand, called for a halt to all legislatively mandated competency based testing until it is determined to be socially and educationally beneficial. Both the Association for Supervision and Curriculum Development and the National Education Association have opposed federally mandated competency standards and testing.

School administrators are divided. Some are enthused about the advent of minimum competency standards, others are opposed. In between are those willing to go along with the movement — cautiously.

Perhaps the strongest argument in support of competency requirements is the potential for motivating students, schools and districts. The intent of the legislation could be fulfilled: students with identified needs could receive enough help, early enough, so they could meet minimum competencies and go beyond them. However, due to the various ways that districts and states are going about implementing competencies requirements, it is difficult to judge if the movement will restore general credibility to the high school diploma.

Perhaps the strongest argument against the competency movement is its almost total reliance on testing. Testing alone cannot guarantee that students will become more competent.

Major Challenges

Some of the major challenges that have to be faced include:

- How to assure that hard policy decisions do not result in soft implementation.
- How to motivate students to meet the minimum standards.
- Communicating to parents, citizens, teachers and other staff members that the minimums are meant as a floor.

- How to remain patient, rather than abandon the movement because it does not solve the problems in two or three years.
- How to make sure the skills tested are imbeded in the curriculum but, at the same time, making sure they do not become the only curriculum.
- How to enable schools to make the changes required of them, given present fiscal constraints, the sharp division between elementary and secondary schools and the need for extensive teacher training if all are to be responsible for teaching basic skills.
- How to accommodate handicapped students or those who speak little or no English. Advice is needed, for example, on how to establish competencies for handicapped students that can be incorporated into federally mandated individualized educational plans.
- Making administrators aware of possible legal challenges. One possible challenge is a charge of discrimination if the minimum competency tests measure knowledge or skills which were never taught in school. Another could be the charge that minimum competency tests were not given an adequate phase-in period. In addition, administrators should be aware of possible legal challenges of tests which are not reliable or that have not been validated. Initially administrators should assure that parents, citizens and students are provided a clear and complete explanation of the minimum competency standards, how competencies will be tested and the possible outcomes for students.

Have Schools Deserted the Basics?

No.

The **Critical Issues** survey conducted for this report shows that the basics have not been deserted. They are still the meat and potatoes of school fare. In fact, they probably are receiving more attention both within and outside of schools than they have for many years.

A reemphasis on basics is taking place, due to internal and external pressures on school systems. More than three-fourths of the 1,505 respondents to the **Critical Issues** survey for this report said their districts were putting more emphasis on the basics of reading, writing and arithmetic than they were three years ago.

The districts were asked to indicate how they were emphasizing the basics. Here, with the percentage of school districts using each approach, is how they responded:

18% Providing more remedial help to students who need it.
17% Spending more time on reading, writing and arithmetic.
15% Changing the curriculum.
13% Increasing the number of professional and paraprofessional personnel.
12% Testing student skills more frequently.
8% Using proficiency testing.
5% Forming special classes or schools emphasizing the basics. (Classes are more popular than schools.)
4% Increasing the number of required courses.
4% Basing graduation requirements on the attainment of specified competencies.
2% Decreasing the number of electives.
2% Basing grade promotion on achievement of minimum competencies.

Additional means being used to emphasize the basics, as cited by respondents:

- Providing inservice training in teaching basics or in compensatory education.
- Using parents and volunteers extensively.
- Increasing library facilities and services.
- Making better use of test results in planning educational programs for individual students.
- Identifying students with specific academic needs.
- Establishing reading and math labs for high school students.
- Providing more coordination in academic subjects.
- More closely evaluating teachers.
- Using reading and math centers in elementary schools.
- Appointing a full-time reading director.
- Keeping skills checklists for each child to assure mastery of reading fundamentals.
- Constantly monitoring elementary classes.
- Finding more effective instructional materials.
- Expanding use of print and nonprint media.
- Providing more professional help for learning disabled students.
- Reducing the number of students assigned to each English teacher.

CHAPTER II

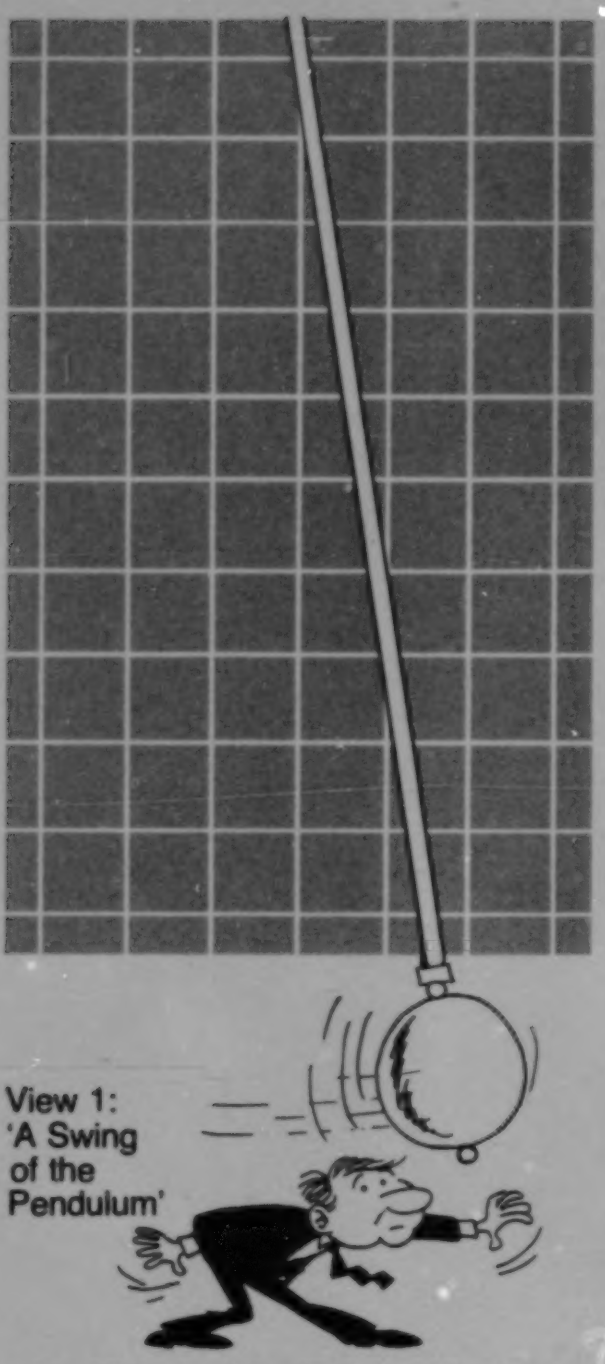
What Do Administrators Think?

What do school administrators think of the competency movement that is sweeping the country in the form of "back to basics" and of competency requirements for grade advancement and graduation?

Based on responses to the **Critical Issues** survey, this picture emerges:

Administrators are widely divided on the issues. Some are optimistic that the responsibilities of schools will be clearly defined once and for all. Others are pessimistic, fearing an overreaction on the part of parents, legislators and educators resulting in a limiting or narrowing of education. In between are those who see the movement as "just another swing of the pendulum," those who are evaluating the possible effects of the movement in their own districts and those who are taking a "wait and see" attitude. All have questions and concerns, mainly in these distinct areas:

1. Who is to be held accountable?
2. Implementation.
3. Effects on the curriculum.
4. Meeting the needs of students.
5. Local control.



View 1: 'A Swing of the Pendulum'

Many administrators describe the current movement as "another swing of the pendulum," "a bandwagon," "a fad," or "the latest craze." Some see it as a positive development.

A curriculum director from Indiana offered this comment: "This swing may raise standards again after going through a period of not applying pressure to students, making school fun, not experiencing failure." He's joined by a director of

pupil personnel in Florida who wants to get away from "expensive frill areas" and by a Montana superintendent who wants to "swing back toward competence rather than having schools run as a social club."

The opposing view is based on the theory that if the pendulum has swung too far in one direction, the same thing could happen as it reverses itself. One Pennsylvania superintendent predicted that as the movement gains force, "the open concept, IGE (Individually Guided Education), modular scheduling and new math, among other 'new concentrations,' will drop by the wayside."

David Farnsworth, assistant to the superintendent in the Cazenovia (N.Y.) Central School District added that "this movement may go too far in overturning the gains of the broad elective system that has developed."

And a California superintendent asserted that "the current swing of the pendulum could be potentially dangerous. It could result," he said, "in focusing only on relatively simple items for assessment and neglecting the more valued outcomes of schooling, such as higher mental processes, aesthetics, creativity, fine arts, development of self-concept."

To a superintendent in Washington State, the ultimate example of letting the pendulum swing in the wrong direction would be the establishment of "an ultraconservative three R's approach."

View 2: 'Competency Requirements Are Good'

Administrators who approve of the current demand for competency requirements usually give two reasons to support their position. The most frequently stated reason is that the movement has served as an impetus for examination, renewal and reform. "We have been forced to reexamine our programs and take a good look at 'progress,'" noted a Maine superintendent. "Programs and teaching strategies are being strengthened. There are higher expectations than a few years ago," said Francis A. Ruffo, Anne Arundel County, Md., assistant superintendent.

Similarly, Supt. Edward P. Yaglou of Holden, Mass., said: "We needed a re-look at education. We have gone too far with the assumption of an affluent society in which nobody 'hasda' do anything they 'dowanna.'"

The second most popular reason given by administrators is that the competency movement has brought education to the attention of the public and has gotten parents and others interested and involved in local schools. "Anything that gets the public and parents concerned can serve as a force for good," a Rhode Island superintendent believes.

Some administrators approve of the competency movement for the very reasons given by their harshest critics. Said one: "The quality of students produced in high schools is poorer than those produced in the past." An assistant superintendent for curriculum from Georgia added: "It is high time that we clarify our position on what we are seeking to do, how well we are doing it and how much it is costing." Some agree with those parents who want schools to be like the schools they attended. "Somewhere, somehow, in the last 30 years, we've lost something that needs to be found again," an Indiana superintendent stated.

An illinois superintendent favors the competency movement because of his belief that it will "get professional teachers and administrators moving back toward dedication to teaching and away from concerns about their own welfare." Others believe, like their critics, that schools have taken on more than their share of society's and parents' responsibilities and that schools must get back to "their real job."

Would education and educators, acting on their own volition, recognize and respond to public demands for accountability?

The results of the **Critical Issues** survey indicate that they would and are doing so. But some superintendents have their doubts. "The profession waited too long to certify to the public the quality of its product, so state legislators are stepping in," said a New Jersey educator. For this reason, some administrators approve of state legislation on competency requirements. Others adamantly oppose it.

One pragmatic California superintendent said of recently enacted legislation in his state: "It doesn't matter whether we like it or not. It's the law."

Here are additional reasons given by respondents to the **Critical Issues** survey on why they favor the current competency movement:

- "It has provided an opportunity to reemphasize the basics and to secure certain curricular changes based on actual student performance."
- "It is good because with all the publicity we are really striving to do a better job."
- It is good because "it has demonstrated that a good deal of student performance can be measured and evaluated on an unacceptable-to-mastery continuum."
- It establishes a floor on acceptable student achievement, "which is long overdue in education."
- "It may increase public confidence in the schools."

View 3: 'It's an Overreaction'

Adminstrators who view the competency movement as bad fear that overreaction has replaced reasonableness. They say that parents and other members of the public have overreacted to reports of poorly prepared students and declining test scores, causing a further slide in public confidence in the nation's schools.

Legislaiors, some say, have overreacted by "making education a political football" and by passing legislation that is creating more problems than it solves and that demands more from schools but provides no additional funds.

Finally, many adminstrators believe that their own colleagues will overreact by responding to demands to narrow the curriculum by eliminating worthwhile innovations, by being "scared into developing new programs rather than improving existing ones," by deemphasizing the "non-basics," and by "returning to an era when everything was geared to the average child."

"The headline seekers will cause many of the good things accomplished in recent years to be eliminated," said an Ohio assistant superintendent.

The competency movement is bad, said a New York superintendent, because "it implies that basics have not been taught and because it gives the anti-tax people an excuse for cutting everything except the basics." Supt. John T. Farinella of Clark, N. J., believes that competency based education has become an end in itself and has no relationship to the task of educating children.

Administrators' Concerns

School administrators responding to the **Critical Issues** survey cited hundreds of specific concerns they have about competency based education. A summary of their concerns follows:

Concern #1: Who Is To Be Held Accountable?

Many administrators object to "having accountability rammed down our throats." They are objecting primarily on three counts:

1. Schools and educators doing a good job are being subjected to criticisms and pressures, along with those who deserve a nudge.

2. Some superintendents expressed concerns that competency based education will become a "witch hunt" in which scores will be tied to jobs.

3. Administrators object to being held accountable for students' scores with no consideration given to factors influencing learning. "How can we control other forces such as the home, TV, peer group pressures, the community — all of the things that affect how much children learn?" asked one administrator. Assistant Supt. Jerald R. White of Culpeper, Va., said he was concerned about accountability becoming a mandate without an indepth study of underlying causes for lack of acquiring knowledge — including teacher education, home conditions and attitudes, and lack of sufficient materials for varying levels of ability. Other administrators object to being held accountable for what students learn because they don't feel they have full control of their institutions due to state and federal requirements, union activities, tenure requirements and insufficient resources.

A California educator insisted that accountability must be shared by everyone involved — educators, legislators, state education officials, parents and students. The last two groups, parents and students, came in for particular criticism by many administrators. "I don't think parents understand that they, too, have a responsibility and must also be accountable for demanding students' cooperation in the education process," said a Georgia assistant superintendent. A Minnesota educator added: "We have to reach the point where a student cannot disrupt the learning situation to the detriment of other students." Orlanda R. Costello, a superintendent in Port Norris, N.J., asserted that "we can guarantee teaching only, not learning. Schools will have

trouble until all rights of parents and students are replaced by responsibilities."

Finally, administrators are reacting to "forced accountability" — accountability imposed by outside groups. Some fear that educators will not take the lead or be included in making decisions on competencies. "Incompetent people are forcing the issue and making decisions that should be made by professionals," said a Connecticut superintendent. "There is a real danger that politicians and people in business and industry will gain control of this movement and disregard the fundamental principles of learning and child growth and development," charged a Kansas superintendent. Another fear is that administrators, teachers or someone will be expected to achieve the same degree of success with each child with little or no regard for the differences among children, schools and communities.

Concern #2: Implementation

Administrators are concerned about the **what, who, when** and **how** of implementing legislation on basic skills and competency requirements.

What: Administrators want to know what the public and legislators mean by "basic skills" and who is to determine them. Will reading, writing and computation have to be stressed so much there will be little time, money or interest in offering the arts, science, physical education, electives, extracurricular events?

Assessment means record keeping and additional paperwork — something administrators and teachers already have in overabundant supply. So where are the additional time and money to come from to perform the testing, recording and evaluative tasks?

"If this movement becomes a great deal of paper-shuffling with extensive amounts of energy spent in monitoring, the sacrifices start outweighing the advantages," said an assistant superintendent from California. And a Pennsylvania superintendent voiced the concerns of many administrators of small districts: "A system that requires additional paperwork and is sent from a state educational agency is not the answer for small school districts that have small administrative staffs."

Administrators question what competency based education will mean in other-than-traditional classrooms. "I am concerned that emphasis will be upon grade level objectives and retention rather that continuous progress programs reflecting a nongraded philosophy," said Supt. William W. Long of the Seaford (Del.) School District.

Who, they ask, is to determine the criteria for measurement? And, in evaluating competencies, how do schools find or devise assessment tools that are appropriate, accurate, understandable, explainable and affordable?

When — In implementing new requirements pertaining to basic skills, ample time is a necessity. Several superintendents suggested that experimentation should precede statewide requirements. "If local committees are to be involved in defining the basic skills required for graduation, ample time must be allowed," one California superintendent noted.

"Until schools can 'gear up' to provide the means to test, record and diagnose the results of these tests of competency we will accomplish little," said Supt. Denis A. Kirkman of the Arcadia (Wis.) Public Schools.

How — The most frequently asked question about how implementation is to be carried out is this: "How can teaching to the test be prevented?" Another concern voiced by Sherman W. Wing, superintendent of the Provo (Utah) School District: "In the basic areas measurement is easier, although it is only as reliable as the instruments used. The concerns come when trying to assess other facets of the curriculum that are as important or maybe more important than the basics when considering what constitutes a well rounded education."

Administrators expressed many apprehensions about the use and possible abuse of tests and test scores. One director of research for an Arizona district fears that "too much importance will be attached to a little bit of data."

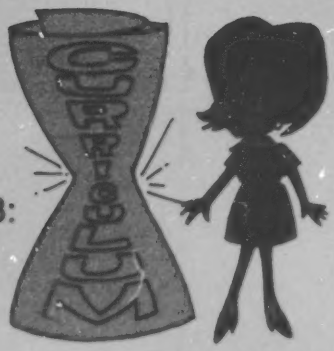
Here are other concerns:

- "Various publics may misuse data generated from these programs to the detriment of children." — George E. Burns, superintendent, Cave Creek, Ariz.
- "Too much reliance will be put on raw test scores with not enough on teacher input." — Frank M. VanDevender, superintendent, Shamokin, Pa.
- "My greatest concern is that some kind of national testing will be required in which only test publishers will come out ahead." — Lynn C. Hise, interim superintendent, Big Spring, Tex.
- "Our greatest concern is overemphasis on test results and their use as a propaganda tool rather than as information for instructional decision making." — James B. Mortensen, assistant superintendent, Lakewood, Colo.
- "Some of the best teaching does not produce a favorable statistic." — J. E. Kuplenski, superintendent, Springfield, Mo.

Other questions on implementation asked by the respondents to the **Critical Issues** survey focused on additional money requirements, staff training and overcoming teacher resistance. ("How can we expect teachers to be accountable for each student's scores?")

As students needing remedial instruction are identified, how is it to be provided? What kinds of remedial instruction will guarantee that students will be able to meet basic competency requirements? And where are school districts to get the money for additional programs, instructors and materials?

Concern #3: Effects on the Curriculum



School administrators' biggest worry with regard to the curriculum is that it will be narrowed, perhaps to the point where only the basics will be taught. "These movements will force some schools to overlook important aspects of education in favor of a narrow curriculum developed under pressure," remarked Supt. Harry Vandergriff of Fayetteville, Ark. And Supt. George H. Slick of New Hope, Pa., is worried that programs such as art, music and foreign languages will become the "sacrificial lambs" of economy minded accountability proponents.

A popular view is that "balance must be maintained." But what constitutes balance? One New Jersey superintendent called for balance in curricular offerings and time distribution, so that "not all of our time has to be spent in preparing a certain segment of the students for competency tests."

To other superintendents, balance means due consideration for the gifted, as well as the average and less able students. Electives and enrichment programs are musts for some. Others stress the need for "aesthetic," "affective," or "real-life related" programs. Specifically, they want to be sure that arts and sciences do not lose out in a "too rigid" curriculum. A Nebraska superintendent said he would consider competency based education ill conceived if it forces a cut in his district's vocational and fine arts programs. And a Pennsylvania superintendent is convinced that despite competency requirements, the public still wants citizenship skills and consumerism taught and moral behavior emphasized.

Concern #4: Meeting the Needs of Students

Will administrators accept — philosophically, at least — the competency based and "back to basics" movement? The answer could hinge on the answer to another question: In trying to assure the competency of *all* students, what happens to *individual* students? The most often repeated concern about students from administrators responding to the **Critical Issues** survey went something like this: "I fear that students' learning styles, learning rates and abilities will not be adequately considered."

Administrators asked further: Will the result of this movement be the improvement of instruction for all, rather than the exclusion of some students? Will the minimums imposed become maximums for the able, and unattainable for the less able students? Will students and teachers aspire to more than the minimum? Will an upsurge in the number of dropouts take place? And finally, what happens when parents bring legal suits based on lack of attainment by students?

There is little understanding, administrators say, among parents, legislators and the public about the great variability among pupils — in ability, motivation, rate of growth, socioeconomic backgrounds, goals, handicaps. "If we ignore these things," said a New York superintendent, "we will be ignoring almost all of what we have learned about educating youth." A counter view holds that fixed achievement levels could be a motivating force for many students.

Nevertheless, "educators cannot be boxed into a corner in which the public expects all children to attain the same levels of competence," noted a Nebraska administrator. Joining him, Supt. George H. Daniel of Bound Brook, N. J., said "schools cannot guarantee that all students will reach an 'average' level of educational attainment any more than M.D.'s can guarantee good health for all people."

Here is what administrators said about possible effects of the competency based education movement on specific groups of students:

Less able students: They fear that this group will receive too much emphasis; that students who lack ability to pass competency tests will be labeled and will not be able to graduate; that they may work hard but get negative reinforcement for failing to achieve desired accomplishments; that too many will be retained or drop out.

Unmotivated students: They are worried about who is to be held accountable "for the students who put forth no effort toward achievement" and about how to make everyone realize that "learning is hard work" and cannot be guaranteed by the imposition of legislation.

"Average" students: They fear that there will be no recognition that some "average" children will never be good readers or mathematicians. They also fear a failure to recognize that "we can never graduate everyone in the top half of the class" and a failure to provide the alternatives and activities that can inspire "average" students to excel in some areas.

Gifted or high achieving students: They fear that special needs will be ignored; that such students will not be challenged; that they will have less opportunity to expand their horizons because of a limited curriculum; that they may receive passing grades when actually loafing under a limited and limiting program.

Concern #5: Local Control

"Accountability to our local governing board and community is reasonable, to be nutured, and is good. Accountability which takes the form of 'compliance' to unrealistic regulations is a major concern and a threat to the long standing philosophy of local control over the community's educational goals, system and operation." That is the view of Supt. Richard L. Moodey of the Lawndale (Calif.) School District.

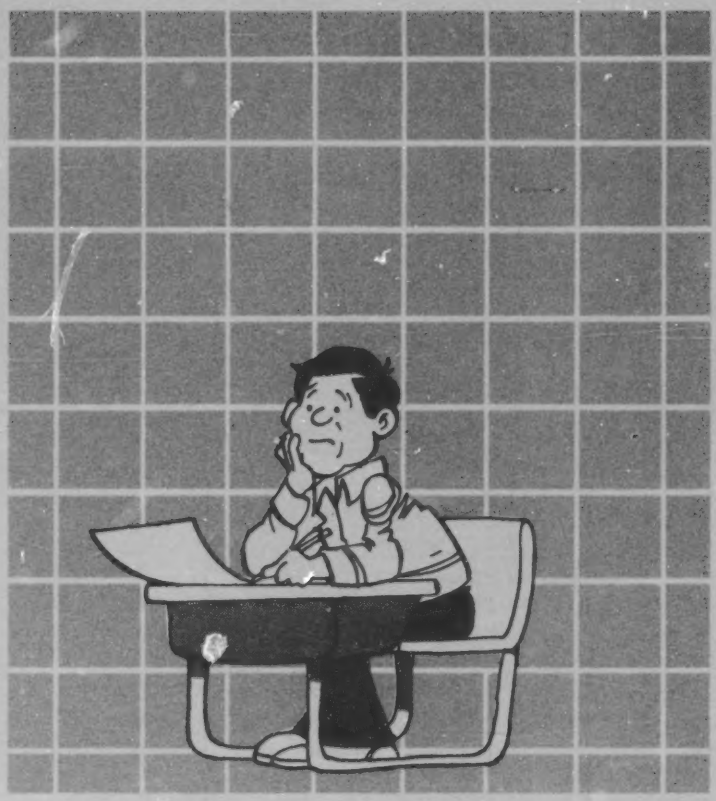
Not alone by any means, Moodey was joined in his insistence on local control by many administrators who had responded to the **Critical Issues** survey. Each, however, had his own definition of acceptable local control. To some, like a Kansas assistant superintendent, local control means that "schools must be given the latitude to develop their own required competencies subject to review and approval by the state." To others, including a Texas superintendent, local control translates into "much less help from legislative and other 'knowledgeable' people."

To a third group, local control means decision making by educators and boards — following input but not dominance by the community, particularly by the "fringe elements." "Some community representatives use the competency based movement as a platform for witch hunting or as a club to voice political preference," said a Colorado superintendent. "My greatest concern is to get adequate local input into program development and not have it rammed down our throats," a Tennessee superintendent added.

Legislators and advocacy groups involved in competency and "back to basics" movements sometimes regard educators suspiciously. But the same is true when the roles are reversed. "Too many inexperienced and unprepared people, who believe they know how to teach and develop curriculum, will get into the act," said an Illinois superintendent.

"People without competencies are forcing the issues and making decisions that should be made by professionals," added a Connecticut superintendent. But, as noted by several respondents to the **Critical Issues** survey, there is no assurance that administrators will or will be able to lead local competency or "back to basics" movements. Clearly, what happens in local districts may hinge on the leadership — or lack of it — by school administrators.

CHAPTER III



Reasons Behind the Movement

Any number of explanations can be given to explain the emergence of a competency based movement in education. Here is a sampling:

- External and internal pressures on schools are bringing about change.
- The public and education itself are reacting to publicity — much of it unfavorable — about education. Of particular concern are two allegations: (1) that some students are graduating from high school without minimum competency in reading, writing and mathematics and (2) that the high school diploma may be more a certificate of attendance than a certificate of competency.
- A consumer-minded public is dissatisfied with the return on education dollars. It is demanding accountability.
- Competency based education is, simply stated, education's newest bandwagon.
- The competency based movement is an outgrowth of at least 12 years of effort to encourage school/community cooperation in goal setting.
- Reports of declining test scores have led to widespread fear that the "basics" have been deemphasized or deserted.
- Education never stands still.

Other explanations could be added to the above list, but pinpointing a single reason is impossible. Instead, all of the reasons appear to be interacting with one another. It is obvious that parents, educators and legislators are reacting to real or suspected changes in education. Put simply, many believe that "schools aren't what they used to be." One of the most frequently cited pieces of evidence to back up that contention is reports of declining test scores. Another is the notion that students cannot read, write or compute well enough to function effectively in the world outside of school.

Here are some of the facts, figures and allegations used to support that notion:

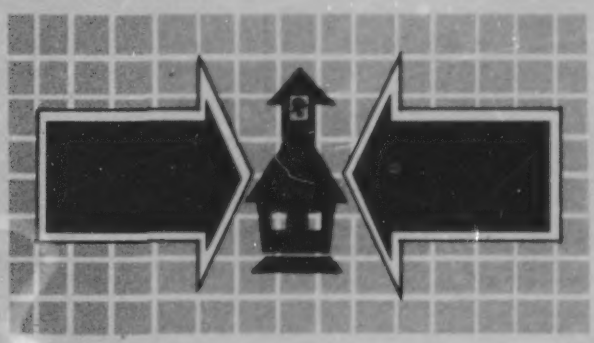
- In 1975, 12.6% of the 17-year-olds tested by the National Assessment of Educational Progress (NAEP) were functionally illiterate, that is, unable to read at a "minimally adequate" level. Based on a student population in that age group of approximately 4.2 million, this could mean that about one-half million students who had reached the normal school-leaving age of 17 or 18 were functionally illiterate. (This does not account for illiterate students who drop out of school early.) NAEP found that the problem of illiteracy is most severe among blacks. Only 58.4% of the black 17-year-olds tested, contrasted with 91.8% of white youth, could attain the minimal level.
- Reports that "Johnny can't read," "Johnny can't do math," "Johnny can't write," and "Johnny can't work,"

are backed up by statements such as the following one by two teachers: "By far the greater number of the young people we teach in our progressive system do not know how to read, spell, write, use correct grammar, do simple math, remember, use logic."

- Reports that: 18 million adults cannot read well enough to file applications for Medicaid, Social Security benefits, bank loans or driver's licenses; that only about half of the nation's 17-year-olds and adults can solve typical consumer problems; that only 55% of the nation's 17-year-olds and 49% of out-of-school adults are able to write an acceptable letter ordering a product by mail.

- "Educational malpractice" suits have been filed in at least four states. They have raised public awareness of functional illiteracy among high school graduates and have called into question the meaning and value of a diploma. In one of the suits, the superintendent reportedly acknowledged that it was possible to get a diploma with only fourth-grade reading skills "if you are supposing a youngster with very limited intellectual capacity." He added, moreover, that "this happens all over the state."

Many charges, sometimes hurled by professionals, have confounded some segments of the public and led others to conclude that schools are "too loose, too permissive, too unprofessional." The charges have centered on grade inflation, social promotion practices, "faddishness," lack of sequential work, permissive policies on absenteeism and class attendance, and too many students required to take remedial courses at the postsecondary level. Unfortunately, the charges often are applied to all schools, all students, all educators. Compounding the situation are lack of agreement on the definition of "basics"; in-house fighting and disagreement among professionals on such matters as methods, curriculum, the comparative value of traditional vs. open education, the "best" way to teach reading and writing, the advisability of exposing all students to new math.



External and Internal Pressures

External and internal pressures are being exerted on schools to reevaluate and in some cases revamp "the basics." The pressure is reflected in initiatives by districts and state education departments and by legislation not only to reemphasize the basics but to make sure students are proficient in them before receiving a high school diploma.

The **Critical Issues** survey conducted for this report shows that whether involved or not in state mandated programs, many districts are reevaluating how and how well the three R's are being taught and how well students are learning them.

The **Critical Issues** survey asked: "Is you district putting more emphasis on the basics of reading, writing and computation than it was three years ago?"

More than three-fourths (76%) of the 1,505 respondents said "yes." Of those saying "no," approximately one-fourth asserted that they were continuing the same strong emphasis they had always placed on the basics. An additional 3% qualified their "no" answer, saying they had started to reemphasize the basics from 5 to 15 years ago.

Why the renewed emphasis on the basics? The Critical Issues survey asked school administrators to indicate why more emphasis was being placed on the basics, if that indeed were the case in their districts.

Most districts cited a combination of reasons, with the combinations varying widely. Here are examples:

- "National as well as local concern with low language skills of high school graduates."

- "National and local publicity, test scores, parent pressure and [illegible] incompetence."

- "Community input, a new superintendent who stressed curriculum improvement, concern on the part of teachers for greater rigor in academic programs."

- "News media, test results, the 'in' thing, state legislation."

All of the reasons cited by respondents were broken into three categories — internal pressures, external pressures, declining test scores.

The results: external pressure most often prompted schools to increase their emphasis on the basics. The most significant external pressures, as determined by the number of times they were mentioned by respondents, are:

- Community and parent pressures.

- State legislative action.

- Pressure from the media in the form of reports of declining test scores.

Other external pressures mentioned by the survey respondents included: actions by local boards of education, directives from state education agencies and the availability of state or federal funds for programs emphasizing the basics.

Trailing behind "external pressures" as the reason for increased emphasis on the basics was "declining test scores." Often, local school districts were reacting to reports of decline on the national level or, as many superintendents noted, their own students seemed to be doing less well, based on tests, assessments or staff observation.

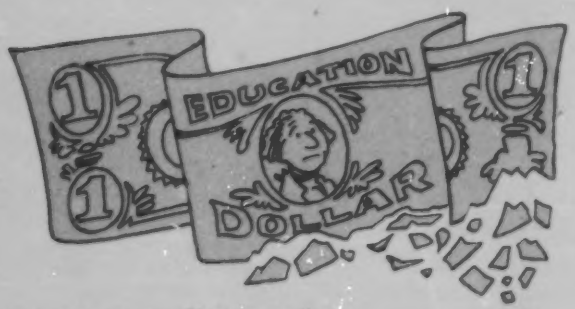
The third and final category of reasons accounting for more emphasis on the basics is internal pressures. Included in this category are staff assessment, staff requests for change and administrators' initiatives.

From several districts came the proud assertion that "we took the initiative" or "we didn't wait for the community or national publicity to start corrective action." Others reported that the emphasis came about due to reasons such as "ongoing self-evaluation," "a desire to improve our teaching," "a deliberate move to measure curriculum effectiveness through criterion referenced tests, diagnostic tests and various achievement tests," and "recognition that developmental reading was not taught beyond sixth grade, yet more was needed."

Some administrators said renewed emphasis in the basics was a response to conditions that schools cannot control: significant shifts in student population, high mobility rates, an influx of students with poor skills and "constant apathy by a large segment of our students." Regarding the latter item, one superintendent noted that the apathy of students could be resulting from their assumption that grade advancement would be made automatically regardless of attainment of any specified competencies.

Only one respondent to the **Critical Issues** survey said that renewed emphasis on the basics was due to student demands. The superintendent in the Washington State district where that occurred noted happily that the student demands were met.

Several administrators said they were reacting to charges from the community of too many "social promotions." Others acknowledged long-neglected school and learning-related problems. One Rhode Island superintendent said: "We have paid little attention to curriculum and instruction in recent years." Another administrator noted: "We picked up too many innovations that were not followed through and evaluated."



Reaction to Publicity

Many stories Americans read about education include sweeping statements about the return on educational investment or the woeful state of learning. Following are some illustrations:

> "Last year [1976], Americans spent far more on all levels of education than they spent for defense; for primary and secondary schooling the bill was $75 billion, more than four times the 1960 figure. . . . It is now clear that all that money hasn't bought much. . . . In the crudest cost benefit terms, the more the parents have spent on schools, the less their children have learned. . . ."

> "Because of the educationists' follies of the past 30 or 40 years, we have reared a generation of illiterates and numbskulls. There are many exceptions, of course, but a pattern of complaint is universal. High school graduates read at the eighth-grade level. Standard test scores keep dropping year by year. Spelling is almost a lost art. The educationists lopped off Latin; they disdained the memorization of classic poetry and drama; they deemphasized writing themes."

> "Declining student achievement and rampant grade inflation in the nation's schools and colleges are largely the result of a widespread and pervasive erosion within the American educational system. . . ."

> "The federal government pumped $40 million into 11 New York City ghetto schools over a period of four years from 1969 to 1973. The result: all 11 schools still report much the same low achievement test scores and high truancy rates. . . ."

In all fairness, it is necessary to point out that many news stories present "good" news about education. And many reporters, while pointing out what's wrong (sometimes "wrongs" that educators do not readily admit), provide balance and tell what's right, promising or working in education. Here are two examples:

> "At age 11, young Willie was already busy snatching purses. By his mid-teens, he had broken both arms in one fight. He made teachers so furious that one instructor ripped off his shirt in class. 'Nearly every day I went to school, I got into a fight,' he recalls." The story details more of what happens to Willie until, at the age of 17, he finally gets into "an unusual institution in the South Bronx slums — an inner-city school that works."

> "Dwindling respect for authority, eagerness for instant gratification, hours of daily television-viewing, disintegration of family life and the use of drugs seem more likely than not to have had their impact on what takes place in the classroom. Not that schools themselves have not changed. For better or worse, there have been the effects of fewer students taking foreign languages, a more flexible curriculum, teacher militancy, a lower dropout rate and a higher college-going rate and a court-enforced loosening of discipline. In such a climate, with research on the links between causes and effects still scanty, one of the dangers is that the schools may be shoved toward simplistic steps that are supposed to shore up educational quality."

Whatever school administrators and boards of education think of the coverage given education by the news media, one thing is clear: the surfacing of problems by the media

often serves as a take-off point for community and parent groups and state legislatures.

Press reports of such topics as declining scores, changes in education and parent concerns pushed many districts into investigating the charges, as applied to themselves. Without the push, little may have been done in some districts to correct problem areas.

That brings up another point: How much do media reports influence public opinion on education? According to the 1969 and 1973 Gallup polls of the public's attitudes toward the public schools, students and newspapers are the public's main sources of information about schools. The 1977 poll showed that 42% of all those interviewed believed that the news media give a fair and accurate picture of the public schools in their communities. When only the responses of public school parents were considered, the figure increased to 48%, with 39% saying that the news media picture was inaccurate.

Public Confidence: Is It Slipping?

According to some critics, the competency movement has gained momentum because the American public has lost confidence in its public education system. To back up that statement, critics point to public opinion polls and to decreased financial support for the public schools. The public opinion polls seem to show decreased confidence. But they also show vacillation in Americans' opinions about schools, education and those running education. Decreases in financial support are real. They could indicate decreased confidence in public education, but they also could reflect a taxpayers' revolt and empty pocketbooks. An examination of both topics follows.

What the polls show: Based on an analysis of the first eight Gallup polls (through 1976), Prof. Vernon H. Smith of Indiana University concludes: "The most striking feature of the polls is the deep and continuing confidence of the public in its schools." But he also notes that the more recent polls (since 1973) indicate that the public's attitude toward public schools is "becoming less favorable."

Another poll, conducted by the University of Chicago's National Opinion Research Center, reveals great fluctuation in public confidence in those running education institutions. The center found that 37% of those polled in 1976 felt "a great deal" of confidence in those running education. By comparison, 37% did so in 1973, as did 49% in 1974 and 31% in 1975. The medical profession received the biggest vote of confidence although its ratings followed a similar pattern of less support in 1975 and gains in 1976.

The survey offers some assurance for education administrators. Specifically: those running education received a bigger vote of confidence than did those running the executive branch of the federal government, Congress or the press. But the rise in confidence in those running major companies surpassed educators in 1976.

In the 1977 Gallup poll, 54% of the public school parents polled gave their local schools A or B grades. This compares with 50% in 1976, 63% in 1975, and 64% in 1974.

The dip in confidence between 1975 and 1976 could have been caused by parents' reactions to publicity about declining test scores. In the 1976 Gallup poll, the public, by a 2 to 1 margin, said a decline in national test scores meant that the quality of education was declining.

Yet, when asked to name the factors most responsible for the score decline, 65% of public school parents chose "less parent attention, concern and supervision of the child," 57% said "students aren't motivated to do well," and 51% cited "too much TV viewing."

The only school factor thought to be responsible by near a majority (41%) of the public school parents was the view that "teachers are giving less attention to students."

Despite such inconsistency in responses, school administrators, not unlike the President, must pay heed to public opinion polls. "Public opinion is one of the most important indicators of the present and future condition of education," concludes the federal government's National Center for Education Statistics (NCES).

The Gallup poll is used frequently as evidence of what's right *and* wrong with education. Members of Congress, parent groups and the media quote it in support or opposition to proposed changes in education. (For this reason, school public relations specialists often recommend that districts consider conducting similar polls at the local level.)

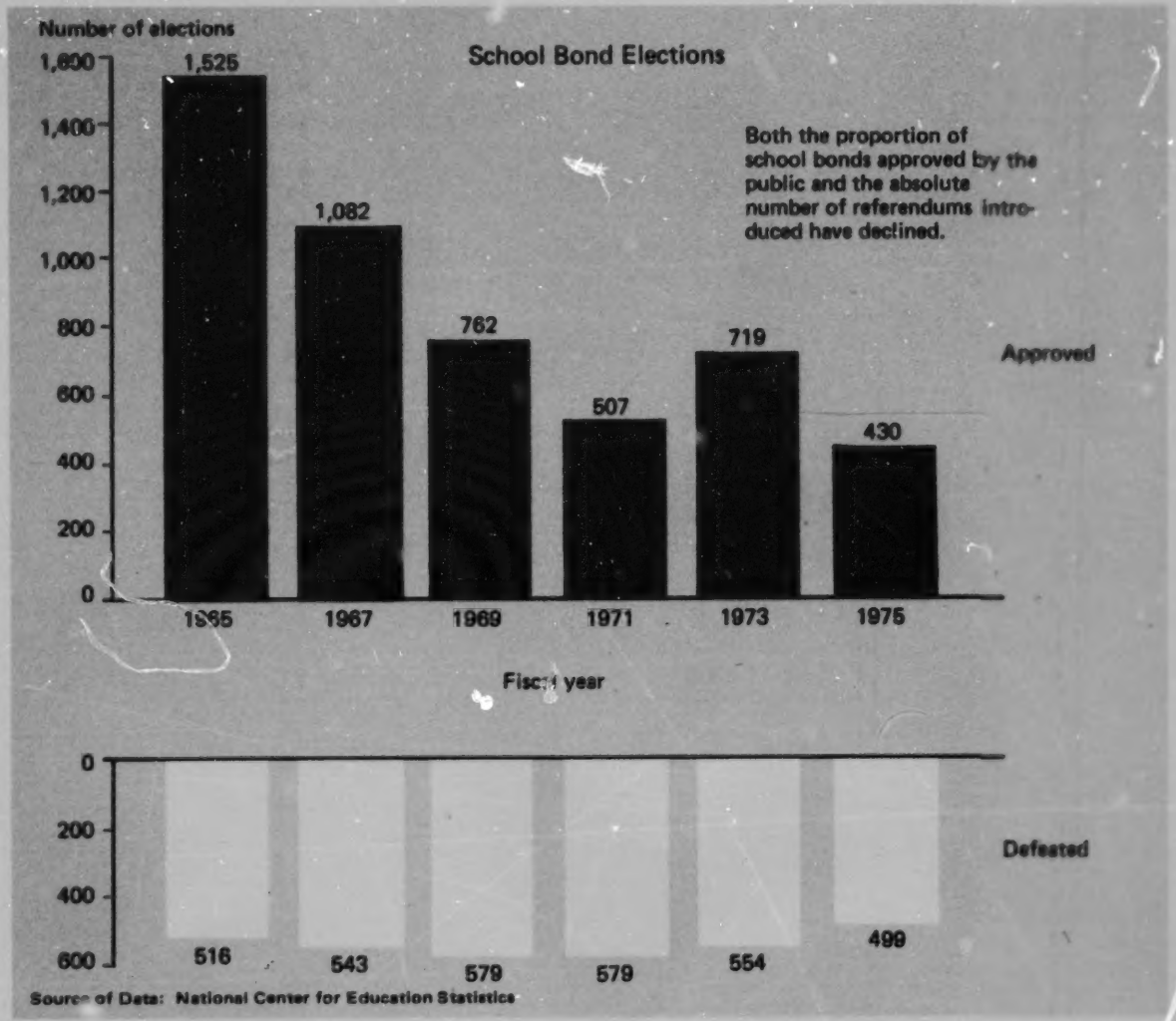
School administrators and boards of education need to weigh responses to several Gallup questions that are related to the competency movement. For example:

- When asked in the 1976 poll what would do most to improve the quality of public school education, the two items receiving support from a majority of public school parents were: "devote more attention to teaching of basic skills" and "enforce stricter discipline."
- When asked in the 1976 poll if all high school students in the United States should be required to pass a standard nationwide examination in order to get a high school diploma, 65% of the public favored such a test, compared with 50% in 1958.
- In the 1977 poll, 47% of public school parents and 41% of all those polled said they had heard or read about the back to basics movement. Most of those who had heard of it regarded the basics as consisting of the three R's, and 83% of those familiar with the movement favored it.

For more information: The Gallup poll is published annually in the *Phi Delta Kappan* magazine. Smith's analysis of the polls appears in *What the People Think About Their Schools: Gallup's Findings*, available for 75¢ from Phi Delta Kappa, Eighth and Union, Box 789, Bloomington, Ind. 47401. Information on how to conduct a local Gallup poll is also available from Phi Delta Kappa.

What the financial barometer shows: A poll conducted by the University of Chicago's National Opinion Research Center in 1976 showed that more than half (52%) of the public think too little money is being spent on education. Approximately 38% of the respondents thought the amount being spent was "about right," with 10% saying "too much" was being spent. The poll raises the question of whether the public would vote to spend more money on education — if it were available. In the same poll, 69% judged that too little was being spent to fight crime; 63%, too little on health; 57%, too little on the natural environment.

Regardless of what people say in polls, what they do counts more. It is a well known fact that schools have fared increasingly less well in public school bond elections. Whereas in 1964-65, almost three-fourths of all bond elections won, less than half (46.3%) did so in 1974-75. In terms of dollars, voters approved $2.5 billion of $3.1 billion at issue in bond elections in 1964-65, but only $1.2 billion of the $2.6 billion put to a vote in 1974-75.



How much of the decreased support is due to decreased confidence and how much is due to a taxpayers' revolt is difficult to say. NCES says the most striking illustration of the impact of increased taxing for schools is the rising tax bill for single family homeowners. The tax bill for a typical homeowner in Hartford, Conn., increased 116% between 1966 and 1972 — from $548 to $1,182. In Boston, the tax bill for a typical homeowner during the same period increased 113% — from $547 to $1,164, and in Des Moines, the bill went from $649 to $944 — a 45% increase.

"The condition of education is disheartening . . ."

Why a Competency Movement?

In testimony before a committee of the U.S. House of Representatives, Phillip R. Shriver, president of Miami University, supported minimum competency testing of high school students because of the large numbers of students needing remedial work upon entering college. He testified that he had requested his own university to require a literacy test before graduation because "the problem we address is national in scope." To illustrate the problem, he said that one of Ohio's largest universities had to offer remediation in subjects such as English and math to 25% of entering freshmen. "I have received letters from college graduates applying for jobs at Miami who literally could not spell the names of the jobs for which they were applying." He noted, moreover, that the students he taught in 1977 were woefully behind their predecessors in some areas — particularly in their capacity to express their thoughts in writing.

Admiral H. G. Rickover, testifying before the same committee, laid the blame for the decline in students' knowledge of fundamentals squarely on the schools. Rickover said interviews with candidates for the Navy's nuclear program were often disappointing. Students are not as well grounded in the fundamentals of their disciplines as were their counterparts 15 years ago, he testified.

The Navy was forced to add a remedial pre-nuclear power school to teach high school graduates the basics of mathematics, physics and chemistry because so many were flunking out. In addition, Rickover said, the Navy is having a difficult time finding recruits who read well enough to do their jobs. "The Navy now requires many of its recruits to enroll in a six-week remedial course aimed at raising their reading ability to the sixth-grade level," he explained.

Causes for the "disheartening" condition of students in Rickover's opinion are such problems as grade inflation, parents' lack of interest, television's effects on student reading and writing skills, and changes in society. But, he said, "I believe the primary blame for the decline rests squarely on the educational establishment."

In a wholesale indictment of educators, he blamed them for allowing students to avoid solid courses in the three R's; for directing the school's resources toward "pseudo-science courses" of the students' choosing; for educational efforts involving "creativity," "making learning fun" and themselves popular, and putting "feelings" ahead of language as the primary tool of expression; and for using new math.

Included in Rickover's tirade were alternative education approaches, the U.S. Office of Education, and "lack of solid academic backgrounds by newly graduated teachers." On the latter item, he said: "Studies have shown that on the average, prospective teachers exhibit the lowest academic ability of any major group in higher education." Low ability, combined with second rate training, he said, means that many students finishing teacher education programs are not competent to teach. Rickover also told the Congressmen that "the incompetent teacher is protected from removal by tenure."

Rickover proposed the appointment of a panel to develop mandatory "national scholastic standards." "If Congress lives up to its responsibility and sees that standards are set, I believe the public will demand their adoption by the education community," the admiral concluded.

Few other commentators seem as ready as Admiral Rickover to denounce education so thoroughly in their evaluations of or arguments for the competency movement. But he is not alone. One back-to-basics proponent, for example, sees the movement as "the only means of survival." Other views on the reasons behind the competency movement and the back-to-basics fervor:

Any lack of success in skill development by schools "has stemmed from the well intentioned but faulty application of educational practices and theories (some of them unsound to begin with), as well as from such 'social diseases' as abject poverty, too few resources to help children for whom standard English is not a first language, turmoil over such matters as busing or segregation, lack of money, or from a temporary cop-out in adults' sense of community responsibility." — Harold G. Shane, education professor at Indiana University and former school superintendent in Winnetka, Ill.

"Ever since the days of Pompeii, men have claimed that the current generation was going to the dogs. This may be part of the problem, but it is not the entire cause. . . . Surprisingly enough, the main cause of today's crisis is the parents themselves. For the last 20 years they have given to the schools more and more responsibility. Today's schools are required to cover so many areas that they do nothing well. No wonder Johnny can't read and write — his teachers are too busy with other matters." — an English teacher in Georgia.

"'Back to basics' may be seen as part of nostalgia in our post-Watergate/Vietnam era. . . . The public is no longer willing to leave education to educators as they were in the post World War II days. . . . Data are now readily available on what schools can do and are doing. . . . We are in the age of consumerism, as witnessed by models of accountability, textbook adoptions, interest in test scores. . . . Collective bargaining has eroded the power of the school board. . . . There is disbelief in the efficacy of innovation. . . . The notion of colleges performing remedial work is ridiculous. . . . Reading and writing have never been as good as they should be. . . . Most teachers are not well educated." — An interview with A. Graham Down, executive director, Council for Basic Education.

"Not satisfied that there's been a decline in basics . . .'

An Interview with the Director of NAEP

Roy H. Forbes became director of the National Assessment of Educational Progress (NAEP) in June 1975. Immediately prior to that, he was director of the Louisville (Ky.) Urban Education Center, associate superintendent for research, evaluation and development, Louisville public schools, and assistant professor of education, University of Louisville.

Q. NAEP is a census of educational attainment. Is it fair to use NAEP results to judge schools' success?

A. It is fair to use the results to judge the general educational program in this country. But we also have some evidence that what's happening in society affects the results as well. So we cannot say that the educational program can be held 100% responsible for changes in educational attainment.

Q. What role have NAEP findings played in bringing about demands for getting back to the basics and for setting minimum competency requirements?

A. Our findings are used by both supporters and opponents of the movements. What is overlooked is that the results show both ups and downs. Sometimes only one side is quoted, or there's little attention to the variance in scores by different subgroups of the student population (e.g., by different areas of the country, race, different educational and economic level of parents).

Q. You've said you are not satisfied that there has been a decline in "the basics" in the past six or seven years. Would you elaborate?

A. It's a matter of specifying what the basics are ('there's no consensus') and of looking at the different subgroups we assess. For most students the 'most basic of the basics' seem to be well in hand. However, our findings show that students in low-income groups are not doing very well in many cases. So instead of asserting that 'there's been a decline in basics,' we should define what basic we are talking about and specify the students who score low in particular areas.

Q. Are there ways NAEP could specify more clearly where changes in educational attainment are taking place and why?

A. We are moving in that direction. We do know that we haven't done an adequate job of using other data bases, such as census data on incomes, mobility and changes in the social composition of schools. We hope to learn from some current efforts by other groups what few additional variables — on neighborhoods or school factors, for example — could help our data to be more descriptive.

Q. What do you think accounts for the widely publicized test score declines?

A. First, let me say that national assessment found essentially no decline in reading in 1975, in comparison with the 1971 data. However, in science and writing we did note declines. Now to answer your question, I believe we have to look at two factors: societal problems and school policy. I believe some of the societal problems that are causing lack of improvement in test scores are the self-destructive behaviors of some young people, including the abuse of drugs and alcohol. The effects of the behaviors are accumulative. The second major factor, I believe is in some school policy and support areas. We know, for example, that a school policy requiring writing on the part of students conbined with a record-keeping system to compare their writing over time and use it to make improvements goes hand in hand with having teachers who know how to teach writing. I also believe that increased achievement occurs when there is strong instructional leadership. The building principal can be a key factor in what happens education-wise in a particulary school. Changes in the family structure *could* be a factor in score decline. I have to say, though, that I know many families where both parents are working and the family is not suffering any ill effects.

Q. One of the most promising recent findings of NAEP is that the reading and writing skills of 9-year-olds have improved. What does that mean for the future?

A. I predict we will see a similar type of improvement for 9-year-olds in the area of math. (Data collection for NAEP's second assessment of math started in fall 1977.) It is more difficult to say what will happen when 13- and 17-year-olds are assessed. I think the positive NAEP results for 9-year-olds are due in some part to education services provided by federal and state compensatory education programs. We don't have comparable continuing support for older students. I'm not suggesting that more federal support for compensatory programs for older students would generate better results because the two factors I mentioned earlier — societal factors and school policy and support — would still carry a lot of weight. We would still have to find ways to overcome these factors, say to minimize societal effects on kids so they could learn the skills they need to function in society.

Q. Recently you said that states have moved too fast in passing legislation on minimum competencies. Would you elaborate?

A. What has happened is that those of us in research, testing and evaluation have oversold what we can do. Some states have passed legislation requiring that testing be set up in less than a year's time. To do it right, it can't be done that quickly. The results would be better if there were more time to prepare and to involve many local people in the process. The ideal amount of time would be three to five years.

Q. Is it appropriate for states to legislate minimum competency tests?

A. Yes. The public has become very concerned about the quality of education in general. Legislators are correct in responding to the public's concerns. So in that sense, legislation is appropriate. What concerns me is that we haven't done a good job of explaining the limitations of testing programs. So some of the legislation being passed may not produce the results its sponsors intended.

Q. Is it advisable to expect local groups of citizens to help set local goals and select exercises in minimum competency tests?

A. Yes. It's not the most cost efficient way, but you do get a lot of spinoffs. It's worth the work to get people involved, to have them look at objectives and to develop some ownership in the final product.

Q. Is NAEP developing a minimum competency test?

A. No. We are not going to develop one. We plan to continue assessing all learning areas as we do now. Besides, we do not have enough items in the 'minimum' range simply to take what we have and put a minimum competency test together. Most standards are being set very low. NAEP exercises range from easy to difficult.

Q. Can NAEP test items be used by states and local districts charged with coming up with a minimum competency test?

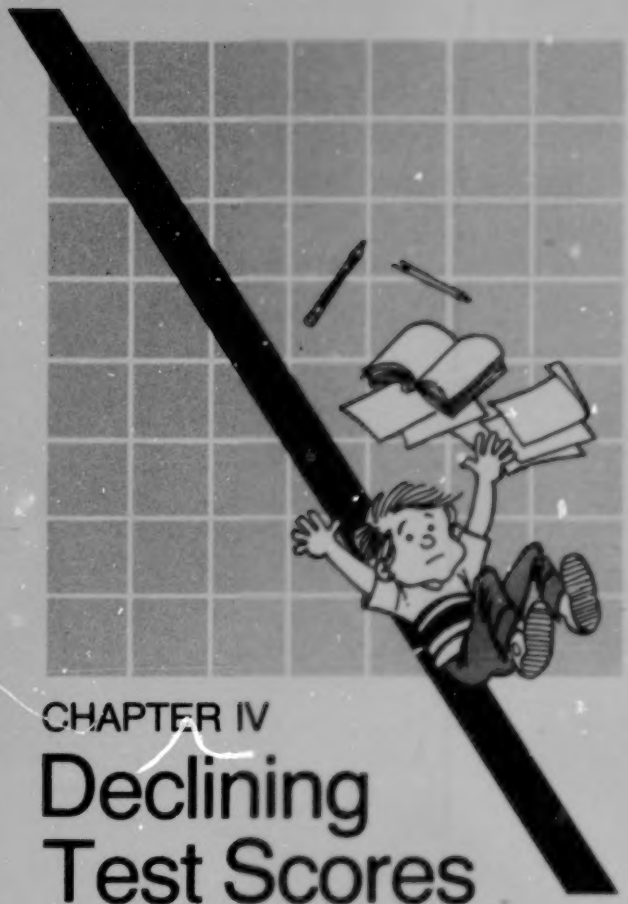
A. Yes. NAEP has 'released' 1,780 test items. They are available for use, and we have comparative data (results) for them. These items can be used to measure cognitive skills such as reading, math, writing or the application of those skills, such as reading a job application form.

Q. In what other ways are NAEP items and data being used by local districts?

A. We've had many districts use NAEP exercises, in writing for example, to test their youngsters and compare the results with regional or national NAEP data. Some districts have used the NAEP exercises and compared the results with a standard or 'mastery level' they've set.

Q. Do you plan to continue working with such groups as the National Council of Teachers of English in interpreting for schools and the public what the NAEP results mean?

A. Yes. Currently we are working with the National Council of Teachers of Mathematics on planning for the interpretation of math data.



CHAPTER IV

Declining Test Scores

Widespread publicity of declining test scores started about 1973. Receiving the most publicity was a decline in the averages received by high school students on the Scholastic Aptitude Test (SAT). Although test developers and administrators insisted that declines in the SAT — whose prime purpose is to measure youth's aptitude for college — should not be used as an indicator of the quality of elementary and secondary education, that's precisely what happened. Not only media representatives but many national spokesmen, legislators, parents and educators inferred from the reported declines that schools everywhere were slipping badly.

As the publicity grew, so did demands for putting more emphasis on the "basics" and for coming up with means to ascertain that students were learning them. Numerous conferences were called to investigate the reasons for declining scores but, for the most part, the "experts" could add little to conjectures already circulating about the causes. The consensus is that there is no one cause. It seems clear that the many changes in society, in education and in students and their families have all impacted seriously — and negatively — on education.

The issue is further clouded by reports that students are doing as well or better than ever on some tests.

A review of the issue of test score decline follows.

The SAT Score Decline

The SAT has been used since the 1920s to help determine students' apparent preparedness for college. Most students taking it are seniors, some are juniors. The one million seniors taking it annually represent approximately 25% of their age group and about half of those going on to college. Scores on both parts of the test — verbal and mathematical — are computed separately on a scale of 200 to 800. The mathematical portion of SAT tests reasoning rather than formal knowledge, and it requires knowledge of math taught in grades 1-9. The verbal portion covers antonyms, analogies, sentence completion and reading comprehension. A 30-minute test of standard English, added in 1973 as a result of a suspected decline in writing skills, requires students to recognize errors in usage and to correct sentences.

As shown in the chart, SAT scores have jagged up and down for more than 20 years. But the 14-year steady decline in both verbal and mathematical scores that started in 1962-63 became the focus of national attention.

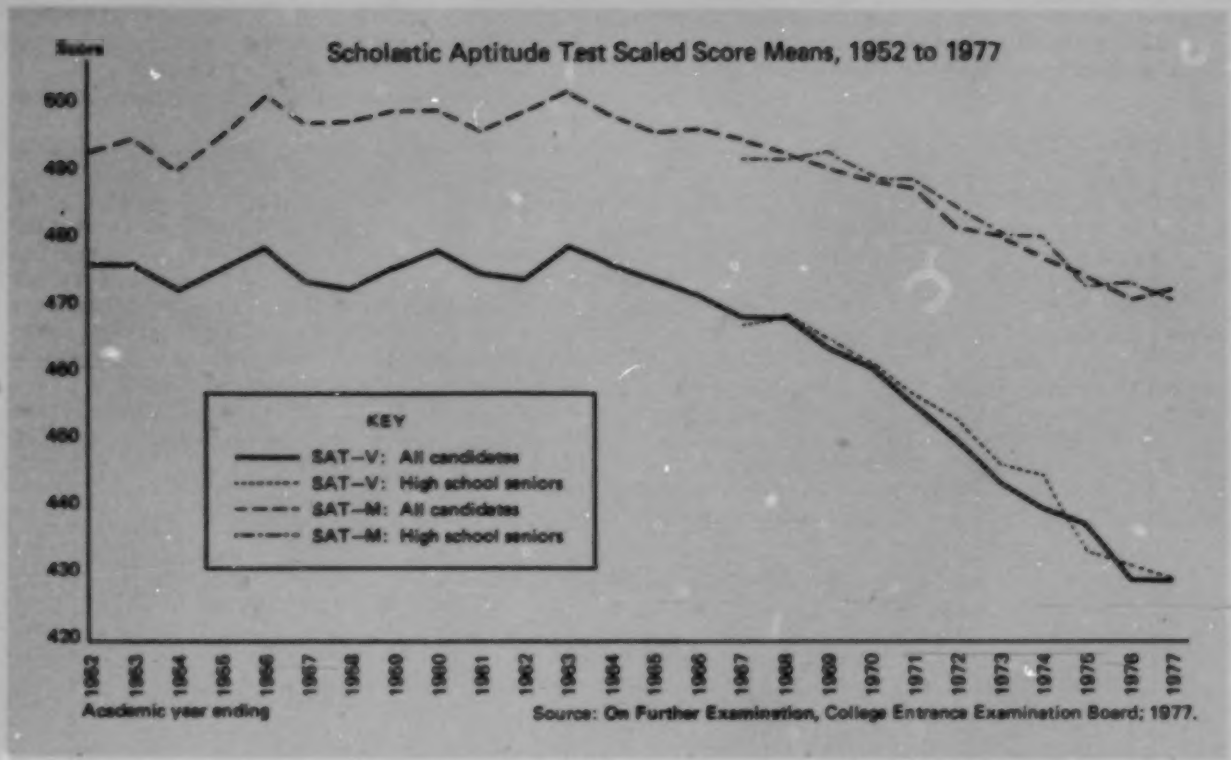
Here's what happened: In 1973, when SAT's sponsor, the College Entrance Examination Board (CEEB), followed its annual practice of publicly releasing the test scores attained by SAT-takers, it commented that the scores had once again declined. The story made front page headlines. Unwittingly, CEEB attracted attention not only to the SAT scores but to how well students at all levels of education were attaining fundamental skills of reading, writing and computation.

CEEB officials admit that they were unprepared to handle the rash of calls from media representatives who wanted more information on the decline. The key question is "Why?" and media representatives, parents, teachers and administrators have their own pet theory. One of the most common is that elementary and secondary schools are failing to do their prime job, that is, to teach the three R's.

Many investigations were started. One of the largest — a two-year, $600,000 study initiated by CEEB — culminated in the August 1977 release of its findings, a 75-page report titled *On Further Investigation* and 27 supplementary appendixes. A panel of 21 persons was responsible for the findings.

The report investigates the 49-point drop, from 478 to 429, in the average score of test-takers on the verbal portion of the SAT between 1963 and 1977 and the 32-point drop, from 502 to 470, in the average score on the mathematical portion. "A decline of this magnitude continuing over a 14-year period is clearly serious business," the report concludes. There was one hopeful sign in the otherwise dismal scores — the declines seemed to be bottoming out in 1977.

At any rate, the declines are actually 8 to 12 points greater than reported due to a "drift in the scale," caused by technicalities in equating and scaling practices. CEEB officials say unequivocably, however, that the SAT is as reliable as ever in fulfilling its prime purpose of predicting individuals' college performance.



"The SAT score decline does not result from changes in the test or in the methods of scoring it," the report affirms. It also rules out cultural bias in the test as a major cause of the decline, noting that special efforts have been made in designing the tests to avoid such prejudice. It says the test predicts college preparedness as well for blacks as for whites and as well for women as men.

The 14-year decline, according to the CEEB analysis, came in two steps. The scores dropped by small increments yearly up to 1970 and more sharply after that, with some of the biggest declines occurring between 1972 and 1975.

Why the decline? Most studies and groups trying to answer that question look for clues in four areas: changes in the tests, changes in the population taking the tests, changes in schools, or changes in society or "social context." CEEB pinpoints two changes in the composition of students taking the test as the cause for about two-thirds to three-fourths of the decline taking place from 1963 to 1970. The two changes were (1) much larger increases in students from lower scoring groups taking the test than from higher scoring groups and (2) changes in college attendance patterns. Unlike SAT-takers in earlier days, many more of those taking the test between 1963 and 1970 were going on to two-year institutions instead of four-year colleges and universities. "It was during the 1960s and 1970s that two-year community colleges grew so fast and that more flexible admissions policies were adopted by many four-year institutions," the report notes.

After 1970, the report says, changes in the test-taking group became less important as a cause of the score decline. Other factors in the schools and in the society at large became more significant, according to the report. It attributes only about one-quarter of the decline from 1970 on to continuing change in the make-up of the test-taking group.

"With a handful of exceptions," it notes, "the drop in scores in recent years has been virtually across the board, affecting high-scoring and lower scoring groups alike." This finding has disturbed many groups studying test score decline. At a 1975 conference sponsored by the Edison Foundation and the Institute for Development of Educational Activities, for example, participants noted with concern the sharp drop in the number of students earning superior scores (over 600) on the SAT. In one year — from 1974 to 1975 — there was a 20% decrease, they noted.

Although CEEB identifies many of the suspected causes for the SAT decline in its report, it contends that "searching for the causes is essentially an exercise in conjecture. So much has happened that may have affected this record that there is no way of telling what did." Furthermore, it adds, "there is virtually no statistical evidence of any causal connection between societal developments and SAT scores. They are delicate matters involved here — such as changes in the American family, the advent of television and an embarrassing decade in American history." Nevertheless, a major portion of the CEEB report is devoted to probing the possible causes. Both society-related and school-related causes are explored.

In addition to the changes in the composition of students, six other "inextricably interwoven" causal factors for the test score decline are cited in the CEEB report. They are:

1. **A "significant dispersal of learning activities and emphasis in the schools,"** that is, the addition of many electives and a reduction in required courses particularly in the area of English and world history. In an interview in *Phi Delta Kappan*, Willard Wirtz, chairman of the CEEB panel, said the problem is not so much an increase in the number of electives but a decline in school standards, as reflected in these courses.
2. **Lowered expectations**, e.g., automatic grade-to-grade promotions, grade inflation, the tolerance of increased absenteeism, easier textbooks and other learning materials, reduced homework, lowering of college entrance standards, and the inclusion of "remedial" courses in postsecondary schools. "The schools may have tried so hard to accommodate the special needs of new and unfamiliar students that these very students along with others have been ill-served by not being held to demanding expectations of performance," says the report.
3. **Television.** Little is known, the report says, about the effects of more television on children's learning. But, it adds, television *is* a cause of the decline. By 1965, when scores started to decline, 95% of American homes had television, according to CEEB. By age 16, children spend more time watching television that time in school.
4. **Changes in the family**, e.g. the increasing numbers of children from one-parent homes.
5. **"A decade of distraction."** The "trauma and sad events" in the United States between 1967 and 1975 "unquestionably undermined respect for established institutions and processes, and this was manifested most overtly by young people." The report adds: "Because they were closest to education's institutions and processes, these were the focus of their protest."
6. **Less motivation.** "There has been an apparent marked diminution in young people's motivation . . . related to their performance on the college entrance examinations."

Reasons Rejected

The CEEB panel ruled out the following factors as possible contributors to the SAT score decline:

- Teacher overload.
- Inadequate financial support of education.
- Youth's changing job prospects and attitudes.
- "Experimental" teaching methods.
- More outside-of-school training for youth.

CEEB found inconclusive evidence about the possible effect on SAT averages of any shift away from liberal arts and toward more vocational and technically oriented training.

The report says, although in an oblique manner, that school violence, crime, juvenile alcoholism and drug addiction do affect students and, therefore, the broader education process.

Due to the small proportion of students affected by forced busing, this issue has had at most only a slight effect on SAT averages, in the CEEB panel's opinion.

The question of the effect of teacher organization and the development of collective bargaining is raised, but quickly dropped. "There is no evidence available to permit an objective judgment one way or the other," the report concludes.

Also dropped are another dozen possible causes that were suggested to the CEEB panel members. They range from the influence of "new math" to the influence of the "soft pedagogical left" and from "increasing legislative involvement" in school discipline matters to "the independent school board system, which makes it impossible to set and require national achievement standards."

In reviewing CEEB's findings, one basic fact must be kept in mind: The CEEB panel was concerned with only one statistical measure of one set of competencies of only one minority part of American youth.

Note: The CEEB report, *On Further Examination*, is available for $4 from College Board Publications Orders, Box 2815, Princeton, N.J. 08540.

Decline in ACT Tests

The decline in test scores is not limited to SAT. The other widely used college entrance examination, administered by the American College Testing (ACT) Program, shows a comparable decline since the mid 1960s. Unlike the SAT results, however, ACT scores dropped more in mathematics than in English. There was no decline in the scores on natural science. Social science showed the largest drop.

The average ACT composite score for college-bound students declined by approximately one standard score between 1965 and 1975. The mean ACT composite score dropped from 19.9 to 18.6 on a scale of 1 to 36. The ACT program reported that the declines reflected actual changes and were not due to random fluctuations in test scores.

ACT attributes the declines to "a changed pool of college bound students" and to academically weaker students. It notes also that colleges have adapted to the lower scoring and less well prepared students.

In its report, *Declining Admissions Test Scores*, ACT cites as causes for academically weaker high school students the greater use of electives, lowering of teacher demands and expectations, and "schooling directed relatively more by students than by teachers."

Here are some other pertinent conclusions from the ACT report:

Grade inflation: Although college admittance tests were showing declines, high school and college grades were rising. ACT's data, shown in the chart, indicate that high school students received more A's and B's in 1974-75 than did their counterparts in 1962-65.

Distribution of High School Grades, 1962-65 and 1974-75, for Enrolled College Students

		High School Grades			
1962-65		English	Mathematics	Social Studies	Natural Sciences
Distributions	A	18	13	23	14
(Percents)	B	41	29	39	34
	C	34	38	30	38
	D	7	16	6	11
	F	0	2	0	1
	NA	1	2	2	3
1974-75					
Distributions	A	30	19	34	22
	B	44	32	39	36
	C	22	33	20	27
	D	3	9	2	4
	F	0	1	0	0
	NA	1	6	4	10
1962-65					
Means		2.69	2.37	2.79	2.51
N Colleges =		398			
N Students =		225,402			
1974-75					
Means		3.03	2.62	3.08	2.83
N Colleges =		1,218			
N Students =		43,926	(10% Sample)		

Source: *Declining Admissions Test Scores*, ACT.

The pattern of rising grades was similar for all four subjects at the college level. In ACT's words, these changes "showed a dilution in the quality represented by the highest letter grades" and reflected hesitancy to assign D's and F's.

Relevancy of the ACT tests: While admitting that the picture is fuzzy and the answers uncertain, ACT concludes that the relationship between the tests and the high school and college curricula is approximately the same today as it was 10 years ago.

Based on statements it heard from teachers, professors and school adminstrators, ACT surmises: "It is possible that schools and high schools in particular are now teaching more abstract than concrete knowledge." For example, it notes, "through the new math students may have increased understanding of numbers and mathematics but have less experience and skill in arithmetic and algebraic operations.

"Similarly," ACT states, "many English teachers today may emphasize written and oral expression in contrast to punctuation, sentence structure or vocabulary." If this line of speculation has some validity, ACT concludes, "there has been a slight curricular redirection in the schools with the consequence that schools are teaching somewhat different material than is measured by the various tests." It adds: "Whether schools ought to be teaching this or something else is a matter for curriculum specialists and ultimately perhaps the general public to resolve."

For more information: The report, *Declining Admissions Test Scores*, is available for $1 from ACT Publications, The American College Testing Program, P.O. Box 168, Iowa City, Iowa 52240.

Decline in Other Tests

There are some other pieces in the "declining score" puzzle worth considering. One example: on a shorter version of the SAT given mainly to juniors, the declines between 1963 and 1973 were substantially smaller than those on the regular SAT. Another discrepancy: on 14 subject matter achievement tests taken along with SAT by students with higher than average ability, relatively small declines were recorded in the past 10 years on four of the tests, with increases in six others.

California Results. What picture emerges from other tests taken by elementary and secondary students? As one example, results from the California statewide testing program, one of the most comprehensive in the nation, clearly show a substantial decline by older students over the seven-year period, 1969-70 to 1976-77. Students in the 12th grade show the largest declines. A summary of the results, published by the California State Department of Education, which administers the tests, shows that:

In reading, California 12th graders showed an 11-point decline between 1969-70 and 1976-77, when compared to national norms, as follows:

Year	Percentile
1969-70	52
1970-71	49
1971-72	49
1972-73	47
1973-74	47
1974-75	41
1975-76	42
1976-77	41

In written expression, California 12th graders showed an overall 9-point decline between 1969-70 and 1976-77, as follows:

Year	Percentile
1969-70	42
1970-71	40
1971-72	38
1972-73	36
1973-74	34
1974-75	32
1975-76	34
1976-77	33

In the qualitative area (math), California 12th graders held steady at the 48th percentile from 1969-70 to 1974-75, when a 7-point drop occurred. Students scored higher, by comparison, in 1975-76 and 1976-77.

Year	Percentile
1969-70 through 1973-74	48
1974-75	41
1975-76	44
1976-77	43

The scores of **6th graders** in California show both ups and downs, as follows:

Year	Percentile
Reading	
1969-70	48
1970-71	46
1971-72	44
1972-73	44
1973-74	44
1974-75	48
1975-76	53
1976-77	53
Language (written expression)	
1969-70	43
1970-71	43
1971-72	39
1972-73	39
1973-74	37
1974-75	43
1975-76	49
1976-77	51
Arithmetic	
1969-70	47
1970-71	43
1971-72	38
1972-73	38
1973-74	38
1974-75	44
1975-76	50
1976-77	51

NIE's Findings: Participants attending a conference on declining scores called by the National Institute of Education (NIE) in June 1975 concluded that the trends in scores from tests given to elementary and secondary students were inconsistent. In general, the tests for early primary grades do not show declines, while tests for upper primary grades and secondary levels do, according to NIE. (See the table compiled by NIE to show score trends.)

Test Trends, 1965-75

Declines	Increases or No Changes
American College Test (Composite)	Air Force Qualifications Test
Composite Test of Basic Skills	American College Test (Science)
Iowa Tests of Basic Skills (later grades)	Iowa Test of Basic Skills (early grades)
Iowa Tests of Educational Development	National Assessment of Educational Progress: Reading Achievement
Minnesota Scholastic Aptitude Test	Preliminary Scholastic Aptitude Test
National Assessment of Educational Progress: Science & Functional Literacy	Project TALENT
Scholastic Aptitude Test	

Source: *Declining Test Scores*, National Institute of Education, February 1976.

Participants at the NIE conference advanced a number of theories to explain the score discrepancies. They said that tests of primary age groups are concerned with "rote" learning, while tests for older students might be more concerned with abstract abilities. Other theories called into question the impact of categorical federal aid programs, reactions to the Vietnam War, increased television viewing on the part of youngsters and decreased out-of-school reading, changes in family structure and federal aid to nontraditional college-bound groups.

One recommendation generally agreed on by the participants was that public policy "should be aimed at providing students with a higher than current level of performance with respect to verbal and mathematical skills."

Another Analysis: Researchers David E. Wiley and Annegret Harnishfeger analyzed results from many of the tests shown in the NIE table. Here's a sampling of what they found:

Minnesota Scholastic Aptitude Test: Scores on this test, which is taken by 90% of high school juniors in Minnesota, rose steadily to the mid-1960s and have declined continuously since.

Iowa Tests of Educational Development: Scores of Iowa students (grades 9-12) show the same pattern of decline as the SAT and ACT.

Iowa Tests of Basic Skills: These tests, given to students in grades 1-8, show a trend of decline down to grade 4. Third graders do not show a decrease in test scores over the past decade, but they do when they are tested in later grades.

Comprehensive Tests of Basic Skills: These tests, given to students in grades 2-10, show small gains in 2nd, 3rd and

4th grades and losses, widening with each increasing grade, for grades 5 through 10.

Stanford Binet: Preschoolers taking this IQ test in 1972 averaged 10 points higher than their age-mates of the 1930s; 10-year-olds averaged 2 points higher; and adolescents scored about 6 points higher. The preschoolers tested in 1972 showed an average 3-point drop when tested again in 1975.

The two researchers say in *Achievement Test Score Decline* (published by CEMREL, Inc., 3120 59th St., St. Louis, Mo. 63139) that their research turned up some "potentially powerful factors" for the decline.

"The strongest explanation," they say, seems to come from curricular changes. "Our gross data indicate a considerable enrollment decline in academic courses. Secondary pupils have been taking fewer courses in general English and mathematics. Also decreasing is enrollment in typical college preparatory courses such as algebra, first-year foreigh languages and physics.

"These course enrollment declines parallel closely the test score decline patterns. Declines both in course enrollment and achievement scores are largest for English, followed by math and natural science."

The researchers note, as many others have, that "schools influence out-of-school life and vice versa. School schedules, homework and school-focused peer groups, especially in secondary school, structure and determine the pupil's life outside of school and to some extent that of his family."

Less decline in scores among the lower grades (1 to 4), the researchers say, may be due to the different (positive) effect of TV-viewing (such shows as Sesame Street and Electric Company), and the absence of curricular change in elementary schools.

Rather than say that schools should return to whatever they were doing before the decline, Wiley and Harnischfeger ask questions such as: "Have pupils gained in areas not assessed with typical standardized tests?" "Have they gained in understanding of aesthetic issues?" "Have there been relevant curricular changes?"

Maybe, they suggest, parts of traditional course content are obsolete. For example, they ask: "Does the move toward special courses in English, such as science fiction and media analysis, necessitate a reconsideration of what basic courses should contain?"

In testimony before a subcommittee of the U.S. House of Representatives in May 1977, Wiley advised that until tests are constructed that reflect both the goals of education and the actual instruction given, educators "should not be automatically frightened by the results of partially inadequate test instruments and be quickly stampeded to 'back to basics.'" As recounted in *Education Daily*, Wiley explained: "We've moved from an era when tests were developed against a background of strong consensus on goals and a consequent great similarity in the curricula widely offered, to an era of disagreement over goals and curricular diversity, but little change in test coverage . . . ." Under these conditions, he said, "it is hard to see how scores could not drop."

What Can Schools Learn from the SAT Report?

Scattered through the CEEB report are numerous recommendations for schools, including the following:

Back to basics: CEEB rejects "returning to the basics" unless it includes full reappraisal of what the right basics are and takes into account different rates and modes of learning and different interests and plans for the future. "The need is not to revert to uniform drills and exercises commended only by a traditional pedagogy, but to move ahead to a larger emphasis on the fundamentals of learning that can be identified as strengthening the base on which all students can build."

Establishing standards: Teachers, students, parents and the broader community must be involved in correcting the practices that result in lowered educational standards, e.g., tolerance of absenteeism, grade inflation, automatic promotions.

Grade to grade promotion based on achievement of prescribed scores on standardized tests. "Depending on rigid cutting points on test scores for this purpose (grade to grade promotion) makes no more sense than it does for college admissions." The CEEB panel suggests that promotions should be made on a case by case basis, "taking account of each student's social and psychological development as well as intellectual growth and permitting flexible arrangements for moving ahead, for example, in certain subject matter areas but not in others."

Electives: "Any broadside condemnation of 'more electives' is mistaken." While not recommending use of a single approach to teaching subject matter, the report does say that "well intentioned change" in curriculum probably has reduced continuity of study with consequent effects on the development of verbal and "quantitative relations skills." Too large a proportion of the recent curriculum changes, it notes, has been accompanied by "a tendency to avoid precise thinking and the demands it makes on both students and teachers." Another observation made in the report is that the lack of proliferation in high school mathematics may be relevant to the lesser drop in the mathematical portion of the SAT. Its most important recommendation: "We attach central importance to restoring the traditions of critical reading and careful writing."

Foreign languages: CEEB backs the restoration of foreign languages, both ancient and modern, because "they increase the knowledge and understanding of the English language."

Meeting the needs of all students: "The lowering of teaching sights" is the wrong approach to extending equal educational opportunity. The right answer, the report says, "is to vary the instructional process still more to take account of increased individual differences, but without lowering standards."

Television: Rather than limiting the use of television, CEEB believes that the community and the family should exercise responsibility for what is learned through this and similar mediums. Schools' role could be one of encouraging this change.

Eliminating racial discrimination in staffing: The report notes that there is much danger in "compromising standards" to eliminate racial discrimination among staff members.

Making major change in educational standards: "Education in this country must or should not become more rigid, more selective, more rejective, more uniform," the report concludes.

CHAPTER V

Facts and Figures

MONEY
ACHIEVEMENT
SOCIAL CHANGES
DROPOUT RATES

In any discussion of the competency movement, four subjects are bound to come up: money, student achievement, dropout rates and social changes. Following is a brief digest of pertinent facts and figures on these subjects, mostly compiled from publications of the National Center for Education Statistics (NCES).

Money

There is no denying that education is big business. Total expenditures for education at all levels amounted to 8% of the gross national product (GNP) in 1976. By comparison, 7.9% of the GNP was spent on education in 1975; 7.6% was spent on health; and 5.5% was spent on defense. The total cost of education in 1977-78 is estimated at $144 billion, $91 billion for elementary and secondary education, $53 billion for postsecondary.

The average per-pupil expenditure in 1975-76 at the elementary/secondary level in public schools was $1,388, reflecting a 158% increase over the 1965-66 figure of $537. However, when changes in the consumer price index are taken into consideration, the actual increase in per-pupil expenditures over the 10-year period was 49%.

Quoting an "average per-pupil expenditure" can be misleading because of the vast differences in per-pupil expenditures by different states. In 1975-76, for example, the lowest per-pupil expenditure, based on average daily attendance, was $881 (Arkansas). The highest was $2,179 (New York).

Another too-little-understood fact is the variance in spending by different school districts within a single state. It is not uncommon for the highest spending district in a state to spend three times more than the lowest spending district in the same state. Approximately two-thirds of the states show great variance in spending. The table illustrates the low, high and median expenditure by school districts in various states and the District of Columbia. The last column shows the estimated annual expenditure per pupil in 1975-76, based on average daily attendance figures.

Current Expenditures Per Pupil
1974-75

State	Low	High	Median	Average Per-Pupil Expenditure 1975-76
Arizona	$ 700-899	$2,000 +	$1,099	$1,415
California	700-899	2,000 +	1,163	1,320
Connecticut	700-899	1,800-1,999	1,228	1,659
Florida	700-899	1,300-1,499	1,116	1,381
Georgia	under 700	1,100-1,299	801	1,114
Illinois	700-899	2,000 +	1,080	1,452
Kansas	under 700	1,800-1,999	1,213	1,475
Kentucky	under 700	1,100-1,299	675	986
Maryland	700-899	1,500-1,799	1,126	1,516
Missouri	under 700	2,000 +	968	1,186
New York	1,100-1,299	2,000 +	1,650	2,179
Ohio	under 700	2,000 +	840	1,264
Virginia	700-899	1,800-1,999	854	1,197
District of Columbia	1,500-1,799	1,500-1,799	1,552	1,954

Sources: *The Condition of Education, 1977; Statistics of Public Elementary and Secondary Day Schools, Fall 1975.*

Other pertinent facts on financing education:

Source of funds: Of the estimated $81.9 billion expended for elementary and secondary education in 1976-77, 8% came from federal sources, 38% from state sources, 42% from local sources and 11% from other sources, according to NCES.

The cities and their schools: Population, industry, employment and tax revenues left many cities between 1960 and 1970, leaving behind a higher percentage of elderly and low-income residents, consequently, higher costs for public services and increasing danger that expenditures will outpace revenues.

Cities tend to spend a smaller proportion of their total budget on education than do their suburban counterparts. Yet, larger and larger proportions of students served by city schools come from economically disadvantaged groups. Economic disadvantage, in turn, probably is the best predictor of low educational achievement.

Some indication of what is happening in city schools was provided by the Council of Great City Schools in testimony before a House subcommittee. The council testified that in its 28 member districts, the number of children below the 1970 poverty line increased 20% between 1970 and 1975 and was still rising. In 1977, 44% of Chicago's school enrollment were from low-income families. More than 80% of the children from families with low income in the major metropolitan areas are in the urban school systems, as are nearly 25% of all children with language problems which impede their educational progress, the council said.

Teachers' salaries: Between 1965-66 and 1975-76, the average annual salary of classroom teachers almost doubled, going from $6,500 to $12,448. When changes in the consumer price index are taken into account, however, the picture changes. Over the 10-year period, teachers actually gained $1,158 in additional buying power. The total number of classroom teachers increased from 1.7 million in 1965-66 to 2.2 million 10 years later.

Student Achievement

The federal government's official census of what students know and can do is obtained by the National Assessment of Educational Progress (NAEP), a project that is monitored by NCES. NAEP's most promising recent finding is a positive (statistically significant) change in the performance of 9-year-olds in reading. For more information about changes in student achievement, see the following chapter.

Achievement by U.S. students and those in other countries: Final-year secondary students in the U.S. scored below their counterparts in 1970 in four academic areas, according to the Organization for Economic Cooperation and Development, Paris. In *mathematics*, U.S. students correctly answered 20% of 69 items, compared with 40% to 51% right by students in six other countries. In *science*, U.S. students answered approximately 23% of 60 items correctly. Responses from students in six other countries ranged from 26% correct for Italian youth to 45% correct for German youth. In *reading comprehension*, U.S. students answered 40% of 54 items correctly, compared to Italy (45% correct), Sweden (50%), Netherlands (58%) and Britain (62%). In *literature*, U.S. youth, with 59% correct responses, surpassed Italians (57% correct) but were behind students in Sweden (63%) and Britain (71%). (Of course, it must be remembered that many more students — of all ability levels — remain in school longer in the U.S. than in many other countries.)

Social changes

High mobility rates: 50% of U.S. households moved between 1972 and 1976.

Single parent homes: In 1976, 85% of white children under 18 were living with two parents, compared with less than half (49.6%) of black children in the same age group. In one-parent homes, the mother is usually the family head.

Women in the work force: Census figures show that 47% of women age 16 and over were in the labor force in 1976, compared with 43% in 1970 and 38% in 1960. Approximately one-third of all mothers with toddlers under three years of age were employed in 1975. Out of 47 million husband-wife families in America, the husband is the sole breadwinner in only 13 million, or less than one-third of them.

Economically strapped families: In 1975, 12% of the U.S. population was below the poverty level ($5,500 for a nonfarm family of four). The number of families in poverty stood at 5.5 million.

Divorce rate: The divorce rate per 1,000 population has doubled in the last decade, from 2.5 in 1966 to 5.0 in 1976. If recent trends continue, says the Census Bureau, one in three persons between 25 and 35 years of age may end their first marriage in divorce.

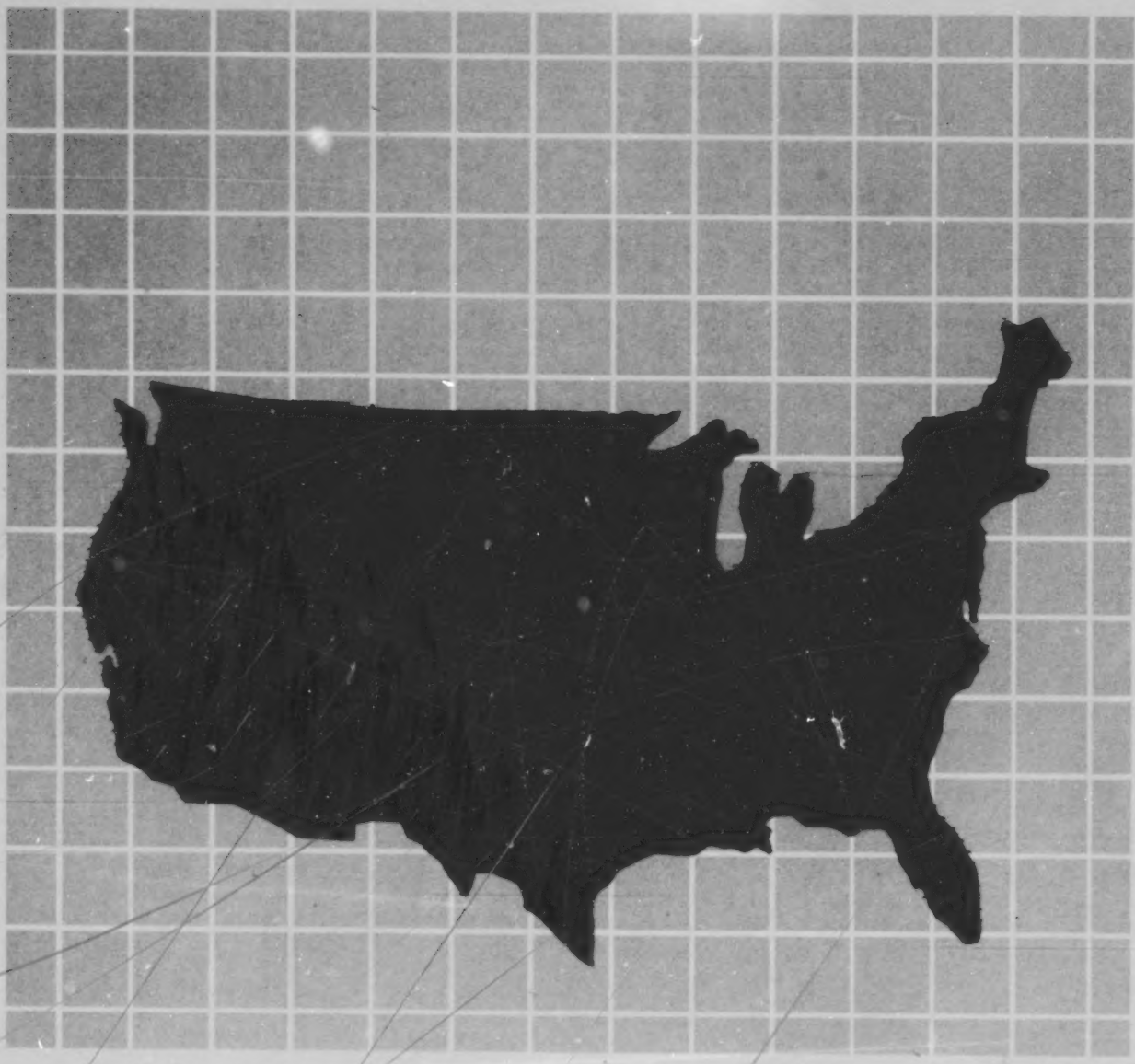
Students needing bilingual education: Up to 6% of the school-age population has limited English speaking ability, according to the first federal report on bilingual education (1976). Approximately 3.6 million persons of limited English-speaking ability in the U.S. are between 4 and 18 years of age.

Dropout Rates

One of the most frequently cited causes for changes in test scores is that the composition of the student population has changed. Many students who would have dropped out of schools in days past are staying on, through high school and often into college. Looked at positively, this change is one of the most remarkable aspects of American education in recent years.

The median number of years of schooling completed for persons 25 years old and over has risen from 9.3 years in 1950 to 12.3 years in 1975. The number of 17-year-olds receiving a basic education, as indicated by graduation from high school or completion of a high school equivalency program, rose from 8% in 1909 to 50.8% in 1940. A rapid rise took place after 1945, and by 1965, 76.3% of the nation's 17-year-olds finished high school — slightly more than the current 75% rate.

The rate of dropping out by white males and females remained fairly constant between 1968 and 1975. It stood at about 10% for males and 11% for females. The number of blacks who drop out of school has been declining — from about 24% for males and 22% for females in 1967 to 18% for males and 19% for females in 1975. About 25% of all persons 14 to 24 years old of Spanish origin are dropouts. But, for Spanish origin groups who usually speak Spanish at home, the dropout rate goes up to 45%.



CHAPTER VI

National Assessment Can Help

School administrators and board members need to broaden their knowledge of the National Assessment of Educational Progress (NAEP) for several reasons. First, the creation of NAEP has not only given rise to state assessments, but NAEP data are frequently referred to in discussions about the basics, minimum competencies and student achievement.

In addition, many local districts are using NAEP test items or exercises because they allow for comparisons of student achievement in similar school districts, in the same region of the country and nationwide. NAEP has a pool of released exercises that school districts may draw on to determine how well students are meeting local goals and, if desired, in the development of a minimum competency test.

What Is NAEP?

NAEP is a federally funded project specially charged with measuring the nation's educational progress by determining the skills, knowledge and attitudes possessed by American youth. It is the only project of its kind in the United States. The funding agency is the National Center for Education Statistics, and NAEP's home base is the Education Commission of the States in Denver.

Started in 1969, NAEP assesses one learning area per year. In all, 10 areas are assessed (art, career and occupational development, citizenship, literature, mathematics, music, reading, science, social studies and writing) at four age levels (9, 13, 17 and 26-35). A baseline assessment has been completed in each of the 10 areas, and a second round of tests has been complete in five areas (science, writing, reading, citizenship and social studies). Retesting takes place about every four years.

NAEP reports its findings not only by age groups but by various regions of the country (Northeast, Southeast, Central and West), sex, race, parental education and community size and type. NAEP also interprets the data obtained, so that its findings are useful to educators, program planners and developers.

Many states and local districts use NAEP exercises and procedures to compare their educational progress with that of comparable areas and of the nation. That use concurs with the NAEP mission, as determined by its original designers. They decided NAEP should provide information that could be related to standards set locally in terms of general goals for progress. NAEP also was designed to report the identity of groups of individuals in need of special consideration in efforts to equalize educational opportunity. It was not designed as a diagnostic test, that is, a test to determine achievement deficiencies or strengths of an individual student at one point in time.

NAEP exercises are "worked over" by a select group of curriculum specialists, teachers and postsecondary educators. Lay people review them for importance, bias, offensiveness and stereotyping, and they are field tested.

The administration of a NAEP assessment requires one classroom period of a student's time, since each student responds to only a portion of the exercises. Generally, NAEP administers the test to protect the security of the test and to provide uniformity.

Following an assessment, one half of the exercises are "released" (made available for public scrutiny), and the other half are held for use in a future assessment. Before exercises are used again, however, they are reexamined for validity and appropriateness.

How Well Are Students Doing?

NAEP results do not paint an overall picture of plunging educational achievement, according to NAEP officials. In some learning areas, scores have declined but in others they have gone up.

The 1975 reading assessment showed, for example, that reading skills are improving at the elementary school level and in "everyday" reading situations. A 1974 assessment of writing showed the "basics" (mechanics) to be "well in hand" among 9-year-olds. Another example: NAEP's first math assessment, conducted in 1973, yielded a mixed picture of strengths and weaknesses in math.

Here are additional findings and implications for educators, chosen at random from NAEP results:

Reading

The first assessment of reading took place in 1971, the second in 1975. The first assessment found that youth from the Southeast region performed poorest on reading exercises, while those from the Central region performed best. Females performed better as a group than males at every age level, except young adult (age 26-35). Black youth at all age levels were 12.7 to 16 percentage points below their white counterparts in overall reading levels. The biggest difference in scores occurred between 9-year-olds in the extreme inner city (whose scores were 14.3 points below the national level) and those in the extreme affluent suburbs (8.4 points above the national level). These are examples of the detailed comparisons that can be made, using NAEP data.

What changes occurred in the reading performance of youth when the second reading assessment was made in 1975? Here are some results:

- The average percentage of black 9-year-olds answering reading items correctly increased 4.8 percentage points, while the average reading performance of white 9-year-olds increased by 1.8 percentage points. Even with the greater increases in reading skills, black children are still 13 percentage points below their white counterparts in overall reading levels.

- Thirteen-year-olds were reading at "about the same level in 1975 as in 1971." In both years, the performance level of white 13-year-olds was about 17 points higher than that of blacks.

- Among 17-year-olds, NAEP reported, there were no "significant increases or decreases in reading achievement levels between the 1971 and 1975 assessments." In both surveys, the Southeast region was about 4 percentage points below the national level of performance, while the Northeast and Central regions were about 2 points above the national level. The West was 1 percentage point below the nation. The difference between the average percentages of black and white 17-year-olds answering correctly was 19 percentage points in favor of the white students.

Major implications for educators: (1) Reading skills are improving at the elementary school level, according to NAEP results. (2) The major problem is to help students fully understand what they have read. (3) Among 13- and 17-year-olds, a downward trend was found in inferential comprehension (inferring answers from a passage) and reference skills ("those that help students read to learn after they have learned to read"). (4) Formal reading instruction should be considered for all students at the junior high and senior high level, not just for those with severe reading problems.

Sample Exercise, NAEP Reading

Read table of contents from a weekly news magazine and answer the questions which follow it.

Art	54	People	37
Books	82	National	11
Business	71	Press	66
Cinema	81	Science	51
Education	38	Sports	60
Law	52	Television	45
Medicine	59	Theater	64
Music	46	World	24

A. Under what heading would you look to locate the reviews of a current movie?

- ● Cinema
- ○ Business
- ○ Theater
- ○ Television

○ I don't know.

Nationally, 26% of the 13-year-olds and 62% of 17-year-olds could answer this question correctly.

Sample Exercise, NAEP Reading

You want to call Mr. Jones on the telephone. You look in the telephone book for his number. You would find it between which names?

- ○ Jackson and Jacobs
- ○ Jacobs and James
- ○ James and Johnson
- ● Johnson and Judson
- ○ Judson and Justus

○ I don't know.

Nationally, 62.5% of the 9-year-olds and 86.3% of the 13-year-olds could answer this question correctly.

Functional Literacy

NAEP conducted its first assessment of functional literacy in 1974, the second in 1975. In the second assessment, which was conducted for the federal Right to Read program, "functional literacy" was defined as the ability to perform tasks necessary to function in American society, such as reading newspapers, instructions and drivers' license tests.

To be considered functionally literate, the 17-year-olds participating in the NAEP assessment had to answer 64 of 86 questions (75%) correctly. The assessment results:

- Nationally, 87% of the 17-year-olds reached the minimal standard and therefore were considered functionally literate.
- Among white 17-year-olds, almost 92% were functionally literate; among black youths, only 58% reached the minimally adequate level.
- Among the four geographic regions of the nation, the percentage of literacy ranged from almost 91% in the Central region to 80% in the Southeast.

Major implications for educators: The 17-year-olds did best at reading exercises involving drawings and pictures; second-best performance was in the reading of charts, maps and graphs. The lowest achievement was in the use of reference materials and exercises involving forms, such as identifying the correct amount of coverage for bodily injury liability on an automobile insurance policy, understanding the billing on a book club membership form, and understanding a traffic ticket.

How Do Hispanic Students Fare?

Students of Hispanic origin are consistently below their contemporaries in the rest of the nation in reading, science, mathematics, social studies and career development, according to a May 1977 report from NAEP. The report, the first of its kind to show how Hispanic students fare nationwide in education, reveals that Hispanic and black students at age 9 perform at about the same level in social studies, career development and reading. In reading, for example, 9-year-old Hispanic and black students are almost 11 percentage points below student achievement nationwide; white students of the same age are almost 3 percentage points above the national achievement level.

The NAEP report also notes that many Hispanic students are in grades lower than generally appropriate for their age levels. Only 54% of the Hispanic 17-year-olds are in the 11th grade compared with 61% of black 17-year-olds and 76% of white students of the same age.

There's 'Nuthing' Else To Do

A 17-year-old wrote the following essay as part of a NAEP assessment of writing. The paper received a rating of 5 on a scale of 1 to 8.

"It's just a small, what you would call a dairy queen. It's a small block building with one window to be served from. The bottom half is blue and the top is white. It was named after our school. We are the Vikings. Everyone goes here on the weekends, and sits, and everyday after school. The parking lot is not very big but enough room for everyone. Their ice cream and food is really good and they have a great selection of candy bars. It is mostly always neat because most of us really have alot of pride in our dairy bar. Sometimes we all get thrown out because of the noise or the way people drive in but other than that its a pretty good evening, especially since there's nuthing else to do in this big town."

The majority of the Hispanic population live in the five Western states of Arizona, California, Colorado, New Mexico and Texas. Sizable numbers of Hispanic youth also go to school in New York, Florida and the Midwest.

Writing

The first assessment of writing took place in 1970, the second in 1974. Both assessments consisted of a number of survey questions, multiple-choice and essay tasks. Here are some of the results:

- The writing of 13- and 17-year-olds declined from 1970 to 1974. In the latter assessment, students used a simpler vocabulary, wrote in a shorter "primer-like" style and had more incoherent paragraphs. Only the papers of 9-year-olds showed improvement.
- The mechanics of writing, e.g., punctuation, spelling, capitalization, verb agreement, "seemed to be well in hand" and "did not indicate that schools should go back to the basics," according to two experts on writing and language who interpreted the writing results.
- A greater polarization of abilities showed up in the 1974 assessment, that is, the "have's" were doing as well as ever, but the "have-not's" were doing worse.

Major implications for educators: (1) The best way to reverse the decline in writing ability lies in "teaching writing by making kids write" and "by having more skilled teachers of writing to juggle the incongruities of what is in textbooks and what youths read in everyday life." (2) Writing is inextricably tied to reading; good readers are very often good writers and vice versa. (3) "Both educators and parents should examine their assumptions about the importance of writing skills in this culture and the significance of declines in those skills," say writing experts.

Mathematics

NAEP has conducted one mathematics assessment. It took place during the 1972-73 school year and required skills ranging from basic computation to knowledge of trigonometry and practical consumer problems. Among the results:

- The majority of 17-year-olds and young adults have mastered the fundamentals of addition, subtraction, multiplication and division when presented as computational exercises. But they cannot apply their skills in everyday situations.
- All age levels scored low on the ability to estimate or approximate whether an answer is reasonable — a vital consumer skill.
- Young people from the lower socioeconomic areas performed 10 to 16 percentage points below the national level; those from affluent areas were from 6 to 8 points above.
- Forty-five percent of the young adults (age 26-35) could not read a federal income tax table correctly.
- Only 1 percent of the 17-year-olds and 16 percent of the adults could balance a checkbook.

Sample Exercises, NAEP Mathematics

2. Add the following numbers:

$ 3.06
10.00
9.14
5.10

4. A rocket was directed at a target 525 miles south of its launching point. It landed 624 miles south of the launching point. By how many miles did it miss its target?

ANSWER _____

Results (Percent Correct for 13-year-olds)

		Region of the Country			
Mathematics	**Nation**	**Northeast**	**Southeast**	**Central**	**West**
Item 2	84.3	88.6	79.3	88.5	78.8
Item 4	71.7	78.7	62.5	75.8	67.9

Major implications for educators: (1) Weaknesses in elementary math programs were indicated in the area of working with percentages, development of fraction concepts, complex word problems, measurement tasks and understanding of geometry topics. (2) At the older age level, there is need to develop more problem-solving skills. Even such fundamental habits as checking the correctness or reasonableness of a result or making an estimate appear to be lacking. (3) The ability to approximate deserves more emphasis in the school curriculum.

Citizenship

The first citizenship assessment took place in 1970, and the first social studies assessment in 1972. A combined citizenship/social studies "bicentennial" survey was conducted in 1976. Here are some results from the latter assessment:

- Just over half of the 17-year-old students tested in 1976 knew that each state has two U.S. senators, and that the number of U.S. representatives from each state is determined by the state's population.
- Only about 50% of both 13- and 17-year-olds knew that the President cannot appoint people to Congress.
- Almost one-third (32%) of 17-year-olds did not think it important to vote in all elections.
- Only 16% of the 13-year-olds and 22% of the 17-year-olds knew what steps Congress may take to stop a President from fighting a war without its approval.

A major implication for educators: The education system should address "the cynicism phenomena," that is, the general cynicism "with regard to U.S. government and its officials that started to erode in the 1960s as a part of the Vietnam War protest."

Science

The first science assessment was done in 1970, the second in 1973. In the nation as a whole, science achievement declined for both blacks and whites and for all three school-age levels between the first and second assessments. Here are some of the specific findings:

- Suburban students at all three age levels (9, 13 and 17) performed above the national level, but their rate of performance declined at the same rate as the nation as a whole.
- On the average, one-third of the nation's 17-year-olds and young adults (age 26-35) could not answer simple cause-and-effect questions about the environment. Only one-half of the 13-year-olds could answer a typical ecology question.
- The percentage of rural students who could answer a typical science question increased at all three age levels, a trend that NAEP says could bring rural students up to the national average by 1983.

Major implications for educators: (1) There is a wide gap between the ability of students to demonstrate procedures and their ability to successfully explain procedures. (2) At all three age levels the percentage of students able to do things is much greater than the percentage of students able to explain how, why and what they are doing. (3) Blacks and females almost always demonstrate scientific abilities below the national median.

How NAEP Is Used

Following completion of an assessment of a learning area, NAEP publicizes the results so that educators, federal agencies, parents and other members of the public have a better understanding of what various groups of students know and can do.

NAEP data are also used for curricular improvement. Groups such as the National Council of Teachers of Mathematics and the National Council of Teachers of English have analyzed NAEP results to determine implications for curriculum and instruction. A series of articles appearing in the *Arithmetic Teacher*, for example, examined how students responded incorrectly to the first mathematics assessment and suggested techniques that teachers could use to correct students' computational and problem-solving deficiencies.

How States Use NAEP

Eleven states have conducted one or more statewide assessments closely patterned after NAEP's procedures. They are: Arkansas, Connecticut, Florida, Louisiana, Maine, Massachusetts, Minnesota, New Hampshire, Rhode Island, Tennessee and Washington. By replicating NAEP procedures and using test items from NAEP, these states are able to compare their students' achievement to national and regional results.

Seventeen additional states have employed the NAEP model, materials or data in their own educational evaluation programs. And another 15 states have used the project's consulting services to explore or develop evaluation programs.

Here are examples of how states and districts have used NAEP:

Maine, with one of the most vigorous assessment programs in the nation, has assessed science, reading, citizenship, writing and career and occupational development. Eventually, it will assess its students' knowledge in all 10 learning areas, using NAEP materials.

Maine has used its assessment findings to improve educa-

tion, to determine funding priorities and to obtain federal grants. Using information obtained in reading and science assessments, for example, Maine proved that its French-American youth were an educationally disadvantaged minority. It qualified for a $250,000 grant under the Emergency School Aid Act to produce a children's bilingual series aimed at improving the self-concept and educational incentive of the minority youth.

The state's education department also worked through the Right to Read program and Science Teachers Association to apply survey findings to program planning and classroom instruction. When a statewide assessment in science revealed that Maine's 17-year-olds were significantly below the national average, the state education department, a university and the Maine Science Teachers Association cooperated in retraining 100 local teachers and administrators in the teaching of science. The project was funded by a $46,000 grant from the National Science Foundation.

Maine's assessment findings have also been used to determine funding priorities under Title III of the Elementary and Secondary Education Act and to formulate a statewide plan for career education.

Minnesota first started to use NAEP in 1971 as part of its statewide assessment program. It was the first state to encourage local districts to "piggyback" their own assessments onto the state program. The piggyback idea started in Richfield, a suburb of Minneapolis/St. Paul, and quickly spread to nine other districts.

By mid 1977, 60 districts throughout the state had added local assessments to state and national NAEP assessments in social studies, citizenship, reading and mathematics. Assessments were completed for nearly 42,000 students, ranging from all seventeen 9-year-olds in the little town of Badger to a sampling of 3,500 students, age 13, in Min-

Consumer Tips for School Districts

'How Can I Use NAEP?'

School superintendents should use NAEP "to conduct similar assessments in their own schools. If a superintendent can relate a local problem to a national problem, he doesn't have to be ashamed that it's there; others have it, too. . . . A good administrator has to face facts and say, 'What does it mean? Could we do something about it? Should we apologize for the lack? Shouldn't we say frankly that it's . . . something American schools haven't learned to do, but that we're going to start working on it?'"

— Ralph Tyler
One of NAEP's designers

NAEP's major technical assistance is provided to state education agencies, and it prefers that local districts work through their state agencies. In-depth technical assistance is provided to a limited number of local education agencies that propose unique uses of NAEP procedures or materials.

Here are some questions frequently asked of NAEP:

Q. When is it practical for a small district to use NAEP materials for an assessment?

A. If there is a need to develop local materials for the purpose of matching locally developed objectives; if the curriculum objectives emphasized in the school cannot be matched by and are not available in commercial tests; if the district wants to compare its results with national benchmarks.

Q. How much do local assessments cost?

A. The cost can range from $300 to $25,000, depending on how many subjects and how many students are assessed. Several districts have kept the costs to a minimum by using volunteer help.

Q. When are released exercises available?

A. After each assessment is completed by NAEP, one-half of the test questions along with scoring and other pertinent information are made available to the public. From time to time, special packets of assessment materials are prepared for distribution to schools, especially to those participating in NAEP.

Q. How many items have been released?

A. NAEP currenily has available 1,780 objective-related items that may be used by state and local education agencies interested in developing tests tailored to their unique needs. A pool of test questions which were selected by educators to be representative of minimum competency questions is available upon request. The pool does not constitute a complete minimum competency test.

All information on NAEP's methodology, results and released exercises are in the public domain and may be ordered from NAEP or the Supt. of Documents, Government Printing Office. Lists of publications, prices and other information are available from NAEP, Education Commission of the States, 1860 Lincoln St., Denver, Colo. 80203.

neapolis. The cost of the local surveys ranged from $1 to $3 per pupil for each subject assessed, depending on how much service was provided by the state education department.

The types of services provided to districts by the Minnesota Department of Education includes sampling, test administration, scoring and data analysis. The department also provides booklets, answer sheets and tape recordings (used to help administer the NAEP assessment items).

"By drawing on state know-how and materials, local schools can keep expenses remarkably low as they determine student competencies," said Rosemary Schneiderhan of the planning, evaluation and reporting unit of the Minnesota Department of Education.

In an article in the *NAEP Newsletter*, Schneiderhan explained that the state mandated districts to submit annual policies for establishing education goals, evaluation and reporting. "Piggybacking local studies with state and national assessment is one way for local districts to meet the evaluation component," she said.

A positive effect of the assessment, Schneiderhan added, "is that teachers have become keenly interested in examining the results and in pinpointing areas in need of improvement."

Here are some additional examples of how various states have used or modified NAEP procedures and outcomes:

- **In Louisiana**, a 1976 assessment of math skills modeled after NAEP resulted in recommendations to strengthen math instruction throughout the state. The recommended changes included placing heavy emphasis on elementary math skills, teaching the metric system, establishing minimum competencies to be attained by the end of the eighth grade, and requiring more college hours of mathematics to strengthen certification requirements of elementary and junior high school teachers of mathematics.

- **In Florida**, education officials added a separate reporting category for Spanish speaking youth — a category not used by NAEP.

- **In Rhode Island**, 17-year-olds were assessed in eight learning areas by using NAEP-type criterion referenced tests, which measure skills according to objectives predetermined by Rhode Island educators. In addition, the 17-year-olds were assessed in three cognitive "life skills" — comprehension, analysis and evaluation. Results from the assessment are to be used for policy making in such areas as establishing minimum competency levels, continuing basic skills programs and expanding compensatory education approaches to all students in the state.

- **In California**, NAEP methods and exercises have been used for two major state education efforts: the 1974-75 statewide testing and the certificate of proficiency examination that is offered to students in lieu of traditional high school diploma requirements.

- **In Illinois**, the state's Office of Education adopted its reading objectives totally from NAEP and used some NAEP exercises as part of its state assessment. Other assessment items were shaped to Illinois needs by 160 volunteers. As one result of its 1976 assessment of mathematics, the state agency trained 80 teacher trainers in metrics due to the poor performance of 11th graders on exercises involving metrics. Expansion of the assessment program is planned. Joseph M. Cronin, state superintendent, said his agency will work directly with larger districts on suitable testing to establish performance requirements for high school graduation or other local purposes.

How Districts Use NAEP

Local districts, as well as states, have used NAEP's general assessment methodology and released test items in their evaluation or assessment efforts. The released items come complete with breakdowns of responses by different age groups, regions of the country, sex and race of students, size and type of community, and parents' educational level.

Widespread interest in students' writing abilities led the Cheyenne Mountain (Colorado Springs, Colo.), Lincoln (Neb.), Air Force Academy (Colo.) and Dover (N. H.) schools to NAEP. All used NAEP exercises in local assessments of writing.

In addition, officials in the **Cheyenne Mountain Schools** determined that the objectives of the NAEP mathematics exercises were consistent with the district's objectives.

The district officials selected 65 math exercises from the 1972-73 national study of mathematics skills, reprinted the exercises, duplicated the audio tapes used in adminstering the exercises and replicated NAEP scoring and tabulation materials. Fifteen mothers were recruited to hand score and tabulate the assessment results, following NAEP methods. As a result, the cost of the assessment was far less than the district would have spent to create its own study, according to a spokesman for the school system.

In Roanoke Rapids, N. C., an intensive effort to identify minimum math skills culminated in the development of a test, 30% of which was taken from NAEP exercises.

A federally funded project in the North Carolina district undertook the identification of essential mathematics skills needed either for daily living or on the job. First, 650 residents and nearly all community businesses were polled, followed by surveys of large national corporations and math educators throughout the United States and Canada.

The list of skills deemed necessary for survival by those polled showed a high degree of agreement, according to Robert C. Clary, the project's director. The skills were used to develop the district's math test, which was administered to 500 local high school pupils in the spring of 1977.

Teen-agers Say 'Schools Should Do More'

Schools should place more emphasis on basic academic subjects. That conclusion was reached by 40% of the 17-year-olds tested by NAEP during 1976. Twenty-six percent of the teen-agers disagreed with the conclusion, and 28% did not respond.

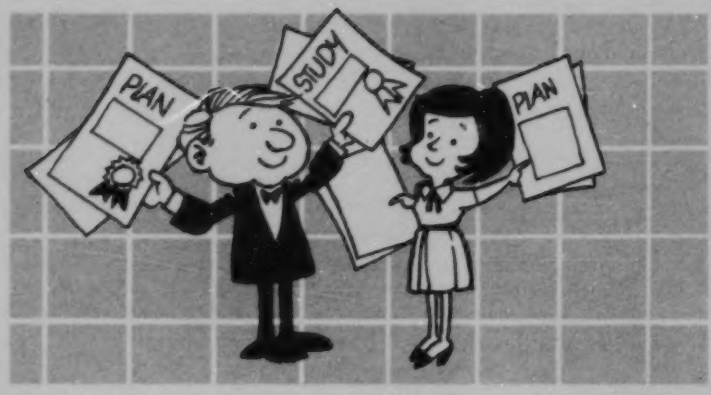
The students were asked to give their opinion in a questionnaire added to NAEP tests. Some students did not have time to complete the tests nor the questionnaires; therefore, the responses must be regarded with caution. They do give an indication, however, of what teen-agers think of school efforts.

Other responses to the questionnaire:

- Fifty-nine percent of the students said schools should provide more help for students who are having trouble with subjects like math and reading; 29% did not respond.
- Forty-one percent said schools should place more emphasis on vocational and technical programs; 20% disagreed; 32% did not respond.
- Thirty-eight percent said schools do not offer enough practical work experience; 22% disagreed; 33% did not respond.
- Forty percent said schools provided them with counseling that will help them continue their education; 22% disagreed; 33% did not respond.
- Thirty-three percent said schools provided them with counseling that helped them get a better idea of themselves and their relations with other people.
- Twenty-seven percent said schools provided them with counseling that will help them find employment; 37% disagreed; 36% did not respond.

CHAPTER VII

What's Happening in the States



If there is one phrase to describe the competency movement at the state level, it is "dizzying diversity." Every state is involved or on the fringe of involvement. The action ranges from study by blue-ribbon committees to implementation of state legislation intended to guarantee that students will be more competent upon completion of a public school education and, hopefully, that schools will do a better job of preparing students for the world beyond the classroom.

Boxscore: 6, 8, 12, 20, ? States in Competency Movement

Keeping up with the competency movement would take daily bulletins, and trying to describe it is like trying to describe apples, oranges and cranberries all at once. That is the opinion of Chris Pipho, associate director of the Dept. of Research and Information for the Education Commission of the States. He has become the nation's unofficial score keeper on the competency movement.

As of October 1977, 26 states were involved in some form of minimum competency activities, says Pipho. At that time 12 states had legislation on the books, 16 were operating under rulings from the state board of education, with some overlap of legislation and rulings in the same state. Thus, says Pipho, the debate as to whether or not to implement some kind of competency requirements is passé in more than half of the states. But, he adds, modification is possible.

The area of most agreement in the various state initiatives is on the need for emphasis on basic skills. Reading is mentioned in almost all states, although it is sometimes included as a "communication" skill. Some of the legislation and rulings specifically mention "life skills" or "survival skills," but the meaning is not necessarily the same. Nor can it be expected to be interpreted the same way where local districts are given the responsibility for interpretation.

Only two states — California and Florida — have legislation enabling students to leave school early upon the attainment of specific skills. California tests student competency with a test developed by its State Dept. of Education; Florida sought and got approval for use of the GED (tests of General Educational Development).

Some of the common threads in the legislation and rulings, as identified by Pipho:

- More than a dozen states have minimum competency testing requirements that affect high school graduation.
- Grade promotion based on attainment of specific competencies is a feature of legislation or rulings in at least four states: Arizona, Delaware, Florida and Maryland.
- At least 19 states require the identification of students needing remedial assistance.

Pipho notes that legislators usually assume that minimum competency tests are already available (some are, but they may not match local needs), or they express the view that the whole testing issue is something that should be left to educators to solve. "On the other hand," says Pipho, "it is fair to say that educators have displayed little sensitivity to the intensity of citizen concern being expressed to legislators over this whole issue.

"Added to this," he says, "is the overriding common sense notion that schools really should teach students how to read, write and compute. It is little wonder then that minimum competency testing displays an explosive potential." He concludes: "There is almost universal acceptance of the need for the concept, but only minimal agreement on how best to attack the problem."

Legislative enactments and rulings by state boards of education have a number of aims and purposes:

- To put more emphasis on basic skills.
- To ensure that pupils are able to perform some minimum set of skills before graduating.
- To allow students to graduate early upon evidence (passage of exams) that they possess certain basic skills.
- To encourage local districts to base grade to grade promotion on mastery of specified skills or attainment of certain performance levels.
- To encourage districts to develop and follow goals and objectives at the classroom, school and district level. The idea is to obtain agreement on the outcomes of education and on how schools can be most effective in helping students attain them.
- To identify student deficiencies in basic skills and to encourage schools to correct those deficiencies through remediation.
- To identify how well schools or districts are preparing students in basic skills and to determine whether "special" programs guarantee better results.
- To encourage districts to move into nontraditional methods of granting credit for the attainment of necessary skills or knowledge.

In some cases, state legislation calls for establishing statewide standards; in others, local districts are given guidance but not told specifically what to do. Parent and community involvement are required by legislation in some states (e.g., California, Florida, New Jersey) but not mentioned by other states.

Overall, the common denominator of all state action is a focus on the three R's, particularly reading. Generally, legislators have decided that the way to force schools to focus on the three R's is to mandate testing or assessment in these areas. More often than not, state legislation makes schools responsible for identifying students deficient in basic skills and for providing remediation in areas of deficiency.

Legislative mandates generally have not been accompanied by special appropriations for mandated testing, record keeping, remediation and follow-up. There's the rub, as far as educators are concerned.

The typical legislator's view is this:

> "Schools are supposed to be doing these things anyway. We are not imposing any new burdens. We just want to assure that students have basic competencies when they graduate."

The typical educator's answer:

> "We are doing the best we can with what we have."

Most state ventures into the competency movement start because of concern over the value of a high school diploma, declining test scores and, perhaps, in imitation of what other states are doing. Pressure for statewide standards also results when one or more districts within the state initiate minimum competency graduation requirements.

In some states, the study of high school graduation requirements eventually has focused attention on basic skills in the early grades. As a result, requirements for minimum competencies as a prerequisite to high school graduation have been accompanied by other mandates to reinforce basic skills starting as early as third grade. Such a turn of events is not unpredictable. Study of declining test scores generally shows that early elementary test scores have remained stable, with decline starting at about the fourth grade.

Generally speaking, state ventures have been spearheaded by legislators, not educators. In several states, initiatives by state boards of education or state education agencies have been rendered null and void by conflicting legislation in a race to determine who will lead state education efforts regarding minimum competencies and basic skills. Local administrators, meanwhile, favor local control of curriculum and graduation requirements, and they fear "too much" state interference.

Legislators remind educators that they are responding to the demands of their constituents to stiffen up education, to put some starch in graduation requirements and to guarantee that all students will be competent in their future roles as workers, family members, parents and citizens.

In some cases, however, legislators are reflecting their own beliefs and experiences. As an example, California legislator Gary K. Hart pushed for passage of legislation mandating districts to set proficiency (competency) standards for high school graduation due to his former experience as a high school teacher. He said he was dismayed to find in his first year of teaching that one-fifth of his 12th grade geography class could not read or handle the work. More dismaying to him was the advice of older faculty members. They explained, he said, that "if a student came to class and was not disruptive, he or she was to receive a passing grade; only the student who was a disciplinary problem, who tried to prevent other students from learning, was to receive a failing grade."

On the other hand, many school administrators who responded to the **Critical Issues** survey for this report commented that they do not welcome state or federal mandates. Administrators in state education agencies often express similar sentiments. One state superintendent said, for example, that he feared "educators will sit back and resist while legislators pass bad legislation." Another feared "proliferation of testing, especially inappropriate 'multiple guess' tests." A third asked, "What will the test data really be used for?"

Other fears and concerns expressed by officials of various state education agencies in their replies to the **Critical Issues** survey:

- Lack of understanding of testing and its limitations by legislators and the general public.
- Lack of sufficient time in legislative requirements for effective implementation.
- Fear that some legislators are riding the "back to basics" tide, intent on "removing frills" from schools.
- Fear that "mandating requirements into law" will not resolve problems. "Local administrators, not the state, must recognize the problems and identify adequate solutions," said Max Morrison, director of planning, re-

search and evaluation for the Iowa Dept. of Public Instruction.

- Concern about how local districts can effectively provide remedial instruction to students who are identified as deficient in the basic skills. "The 20 to 40% of students who are likely to have difficulty in passing a reasonable competency test may be concentrated in large urban and small rural districts," said David W. Gordon, assistant chief for evaluation and research for the California State Dept. of Education. "Now that the high school diploma will be tied to a successful competency assessment, it will be even more important than ever before to mount remedial programs that not only work but that are not so pervasive as to replace the entire curriculum," he said.

The following examples of state activities are not comprehensive, but they are meant to illustrate the diverse activities taking place at the state level across the country. Oregon is given top billing because it was not only the first state to become part of the competency movement but it is the one that, at this time, shows the most potential for making major changes in education.

Oregon

Oregon's education requirements changed, but not very much, from 1913 when the Carnegie unit was accepted, to 1969, when the current reform movement got under way.

In 1969, the Oregon Dept. of Education conducted a needs assessment to determine what the general public, educators, students and high school dropouts felt were important needs or changes in the state's education program. The top need, as determined by those interviewed (800 persons), was discipline. In second place was more vocational education. Third on the list was early mastery of the fundamental skills (the three R's), followed by emphasis on human relations, values, decision making, good health practices, understanding and exploration of occupations and careers, and consumer education.

Another study conducted during 1969-70 by the Oregon Association of Secondary School Principals, at the request of Dale Parnell, then state superintendent of public instruction, resulted in many recommendations similar to those in the needs assessment. Both sets of recommendations were later to be used in formulating the new graduation requirements.

Parnell was particularly interested in making changes in school curriculum that would emphasize career education and that would result in greater accountability on the part of schools.

The way to achieve that accountability was determined to be a goal based educational program and evaluation. There was, moreover, a goal based model to follow — that of the Tri-County Goals Project developed in Oregon during the 1960's.

Community input and proposed legislation also were considered in making the changes in graduation requirements. More than 2,000 persons heard about and discussed proposed changes at 14 town hall meetings held by the State Board of Education and State Dept. of Education during late 1969 and early 1970. In addition, two bills introduced in the State Senate proposed that responsibility for students' basic education be allocated between the state and local school districts. One bill listed the abilities students should be able to demonstrate by the end of high school. Both bills died in the 1973 legislature, but they influenced Oregon's graduation requirements.

The first concrete action based on the meetings, discussions, recommendations and assessments was the drafting of new graduation requirements in late 1971. A key issue — state vs. local control of the school curriculum — was settled in favor of local control.

Four drafts and one year later — September 1972 — the requirements were approved by the State Board of Education. As determined at that time, the first class to be affected by them was the graduating class of 1978.

The foundation for Oregon's competency based program and high school graduation requirements is the state's goal for elementary and secondary education. It was stated this way by the State Board of Education: "Every student in the elementary and secondary schools shall have the opportunity to learn to function effectively in six life roles: individual, learner, producer, citizen, consumer and family member" as follows:

"Individual": To develop the skills necessary for achieving fulfillment as a self-directed person; to acquire the knowledge necessary for achieving and maintaining physical and mental health and to develop the capacity for coping with change through an understanding of the arts, humanities, scientific processes, and the principles involved in making moral and ethical choices;

"Learner": to develop the basic skills of reading, writing, computing, spelling, speaking, listening and problem-solving; and to develop a positive attitude toward learning as a lifelong endeavor;

"Producer": to learn of the variety of occupations; to learn to appreciate the dignity and value of work and the mutual responsibilities of employees and employers; and to learn to identify personal talents and interests, to make appropriate career choices, and to develop career skills;

"Citizen": to learn to act in a responsible manner; to learn of the rights and responsibilities of citizens of the community, state, nation and world; and to learn to understand, respect and interact with people of different cultures, generations and races;

"Consumer": to acquire knowledge and to develop skills in the management of personal resources necessary for meeting obligations to self, family and society;

"Family Member": to learn of the rights and responsibilities of family members and to acquire the skills and knowledge to strengthen and enjoy family life.

Each district's efforts, moreover, must be compatible with the statewide goals.

At the same time Oregonians were changing graduation requirements for students, the minimum standards expected of *schools* also were undergoing change. Oregon's minimum standards for schools dated from the first half of the 20th century, but it was not until 1947 that they became linked to monetary support. In that year, the Oregon legislature enacted statutes giving financial assistance to local school districts from state general funds and directed the State Board of Education to assure that districts meet the standards to qualify for state support. The emphasis originally was on input (e.g., number of classroom square feet per student), but it started to change to output (e.g., what are students getting out of school?) in 1966. With the incorporation of the new graduation requirements into the minimum standards for schools in 1974, schools were required to implement the graduation requirements as a condition of receiving state aid.

Input factors are still important in determining whether an Oregon school is "standard" or "nonstandard" (hence, not eligible for state aid). But now local administrators are expected to clarify what are expected student outcomes. They must carry out certain activities such as developing local goals, assessing student performance, identifying needs and then using the acquired information to improve educational programs.

The minimum standards, including some features of the graduating requirements, were revised by the State Board of Education in 1976 due to pressure from some Oregon districts and the fact that the state was trying to move into completely uncharted grounds. As the first state to pioneer a competency based program, Oregon had no other statewide models to follow.

These are the requirements Oregon districts must meet as part of the state's goal based system:

- **Goal setting**. Three sets of goals must be set at the district and school level. They must be interrelated and complement one another and, of course, be compatible with the state goals. Local boards of education must adopt district level goals, and the district itself must adopt program goals and course goals for each course, grades 9-12. All three sets of goals were to be in place by September 1977.
- **Assessments in reading, writing and computing**. Such assessments are to be conducted within three instructional programs by September 1979 and within six programs by September 1981. Results must be reported to the local community.
- **Policies and procedures for making program improvements**. They must be in place by September 1980 at least in reading, writing and computing in the programs selected for assessment.

There are additional requirements regarding the establishment of minimum competencies as part of the new high school graduation requirements. They are described under "Graduation Requirements," the next general heading in this chapter.

It is important to point out the amount of discretion and decision making power each Oregon school district has in meeting the requirements for minimum standards and high school graduation requirements. For example, local school districts determine where to start in setting goals and specifying minimum competencies and relating one to the other. Districts determine who is involved in setting goals and specifying competencies. They determine how assessment is done (e.g., the type and number of tests used as well as grade level tested), and how competencies are to be demonstrated, verified and recorded.

The Oregon State Department of Education offers guidelines and suggestions in the form of printed materials, films and audiovisual aids, sample forms and lists of competencies, and an eight-part instructional training model, developed to help Oregon educators understand and meet the state requirements.

Planned Course Goals: Wave of the Future?

"Probably the most critical thing we did in Oregon was to require planned course statements," said Don Egge, associate state superintendent for public instruction, in an interview for this report. "In the long run," he added, "this requirement should result in elementary and secondary education working together."

Districts are required to write planned course statements for all courses, grades 9-12 and to make them available to students, staff, parents, local board and interested citizens. (Some districts also have taken the initiative to write course goals for lower grades as well.)

The purpose of the course statements is to let students know what they should get out of a course, as well as what they are required to do to meet the course requirements. Other purposes: to communicate to parents and the public what is being taught in each course, to provide the basis for careful curriculum planning, to reduce possible gaps or overlaps in curriculum and to serve as instructional planning guides for classroom teachers.

How To Tell a Competency from an Enabler

Two examples of enablers would be "the ability to compute accurately" or "word attack skills."

The majority of enablers or enabling skills, says the Department, are programmed into the elementary school curriculum. They are "basics" and help students build toward the competencies they must demonstrate before they graduate.

Competencies, on the other hand, require students to apply their ability to read, compute and analyze in a way that relates to real life experiences.

The essential difference between a competency and an "enabler" or "basic skill" is often confused. But the Oregon State Dept. of Education has come up with some concrete examples of competencies to help guide local districts. Here are a few:

— The student will be able to make appropriate price and quality comparisons for goods and services.
— The student will be able to successfully maintain a checking account.
— The student will be able to read and understand the terms and conditions of a time payment purchasing contract.

Graduation Requirements

Oregon frequently explains its graduation requirements with an illustration of a three-legged stool. The legs are labeled "credits," "attendance" and "competencies." Credits and attendance traditionally have been Oregon's methods of awarding high school diplomas. Competencies were added, the State Dept. of Education explains, to give some assurance to students, parents and the community that the graduating student "is ready to cope, at least at a minimum level with demands likely to be faced beyond the school years."

Credits: Oregon requires students to earn 21 units of credit, starting with the graduating class of 1978. That is an increase of two credits over previous requirements. Eleven of the units are prescribed; 10 are electives. Local boards of education may increase the total number to more than 21 units and may increase the units in required areas of study (no longer called required subjects) to more than the 11 specified by the State Board of Education. New requirements are in the areas of finance, career education and citizenship education.

School districts may, at their discretion, allow many alternative ways of earning credit. Examples are on-the-job work training programs, credit by examination in required or elective courses, independent study, summer school, evening school or college or other off-campus courses.

Attendance: Under Oregon's graduation requirements, attendance is still required for graduation and for the 12 years starting with grade one. Local boards of education may adopt policies to provide for credit by examination and for off-campus experiences or for completion of graduation requirements in less or more than 12 years, as may be appropriate to individual needs.

Minimum competencies: Oregon requires demonstration of minimum competencies necessary to:

- Read, write, speak, listen.
- Analyze.
- Compute.
- Use basic scientific and technological processes.
- Develop and maintain a healthy mind and body.
- Be an informed citizen in the community, state and nation.
- Be an informed citizen on streets and highways.
- Be an informed consumer of goods and services.
- Function within an occupation or continue education leading to a career.
- Be an informed citizen in interaction with the environment.

Oregon defines a competency as "a statement of desired student performance representing demonstrable ability to *apply* knowledge, understanding and/or skills assumed to contribute to success in life role functions." That definition, which was adopted by the State Board of Education in its 1976 revisions to the minimum standards, was intended to help districts understand they should not develop long lists of competencies which describe isolated skills and recall. Rather, the idea was that competencies or "outcome measures" would be a representative sampling of student ability to apply skills and knowledge in the six life roles identified by the board (individual, learner, producer, citizen, consumer and family member).

Each local district is responsible for establishing the specific minimum competencies it will require for graduation, as well as the "necessary instruction" to students so they may meet and demonstrate the competencies. The local district also must identify the "performance indicators" used to verify competencies. The number of performance indicators for each competency may vary, says the State Dept. of Education, according to the level of generality at which the competency has been written. The more generally stated the competency, the more performance indicators needed; the more specific the competency, the fewer the performance indicators needed. (See the list of sample competencies and performance indicators in the "How To" section.)

Each local district must certify the attainment of competencies necessary to read, write, speak, listen, analyze and compute beginning with the graduating class of 1978, and it must certify the attainment of *all* competencies beginning not later than with the graduating class of 1981. Originally, the State Board of Education said that all the competency areas were to be implemented with the class of 1978, but later it decided to allow districts to take a more gradual approach.

By September 1977, moreover, districts had to establish "procedures to insure instruction in any combination of grades K-8 to provide students with opportunities to acquire knowledge and skills applicable to minimum competencies required for graduation adopted for receiving schools."

'How-To' Advice

The Oregon State Dept. of Education advises the professional staff in each district to clearly identify the courses where the verification of particular competencies and any necessary related instruction would be most appropriate. (See the examples in the box.)

Competency	Courses Where Verification Can Occur
Read	
a. Read a 200 word newspaper article and answer questions.	Grade 7, 8, English I, II
b. Read and state three conditions of a contract.	English I, II, Business English, Personal Finance
Write	
c. Write a personal resume which can be used in applying for employment.	English I, II, Business English, Personal Finance
d. Write an acceptable business letter.	English I, II, Business English.
Compute	
e. Complete the short form of the federal income tax.	Math I, II, Personal Finance, Business Math.
f. Balance a checkbook.	Grade 8, Math I, II, Personal Finance, Business Math.

Classroom verification of competencies: Teachers are advised to use a special form to maintain records of the competencies assigned to the courses they teach and to verify the attainment of those competencies by individual students. (See the sample.)

COMPETENCY RECORD
Class Verification

Quarter 1st
Period 2
Class English I
Teacher M. O. Milton

COMPETENCY	Read Newspaper	Read Contract		WRITE RESUME	Business letter									
Adams, John 1	9/77	9/77		10/77	11/77									
Burl, Bill 2	9/77	10/77		11/77	11/77									
Czieweski, Kay 3	9/77	9/77		10/77	10/77									
4														
5														

Rational for use of performance indicators: The department admits that "measuring competency is not as simple as administering a paper and pencil test." And, in many cases, certification of competency will be based solely on the professional judgment of the classroom teacher. "This is why the standards require districts to specify the kind of evidence (performance indicators) which will be accepted as proof that competency has been reached," the department says.

When are tests appropropriate? "Ordinary test items may be useful in determining some competencies, particularly applied performance tests," the department advises. It adds that local districts will probably need to ask in trying to determine the appropriate method of assessing and verifying competencies, "What works best here? How can we legally, practically and efficiently learn whether students are achieving our agreed-upon goals and competencies?"

Remediation — local responsibility: It is up to local districts to determine how students are to receive special help if they cannot meet established competencies. The Dept. of Education advises: "The school must make whatever provisions are possible within the limits of available resources. It is the responsibility of the school to make known the needs of such students and to actively seek the resources necessary to meet these needs."

Diplomas and certificates of competency: Districts are allowed to grant certificates of competency (identifying the acquired competencies) to students who have met some but not all of the requirements for a diploma. Those who fulfill all state and local district requirements of credit, competencies and attendance may be awarded a diploma. In addition, school districts are encouraged to grant certificates of competency as well, with a complete listing of all competencies.

School districts are required to award diplomas to handicapped children who complete a special education program, but the diploma may not be modified to differentiate the special program requirements from those of the regular school program. Any such differences should be noted on the student's transcripts of record, according to state regulations.

School or district record of competencies: A central master copy of competency requirements is suggested for each student, to be maintained by a records clerk either manually or through data processing. A portion of a suggested competency report is reproduced here.

SIS215 COMPETENCY REPORT BY STUDENT NAME

Name of School _____ Date _____
Name of Student _____ No. _____ Grade _____ Class Year _____

ACHIEVED GRADE	QUARTER	TO BE ACHVD	
			READ
09	4		Read Newspaper Article/Answer Questions
		X	Apartment Rental Agreement
			LISTEN
09	4		Recall 5 Details of Oral Communication
			ANALYZE
			(Science 1 and Consumer 1 Complete This)
			SPEAK
09	4		Summarize Points of a Discussion
			WRITE
		X	Respond to a Job Notice
			COMPUTE
09	4		Compute Miles Per Gallon of Gasoline
		X	Determine Simple Interest Rate
		X	Measure Object in Metric-English Units
09	2		Balance a Checkbook
09	2		Make Correct Monetary Change
			BASIC SCIENTIFIC AND TECHNOLOGICAL PROCESSES
		X	Cite Everyday Effects of Computers
		X	Class Renewable/Nonrenewable Resources

Source: *Graduation Requirements Guidelines, Revised;* Oregon State Dept. of Education.

Progress and Problems

How are Oregon's 334 school districts doing in implementing the new competency requirements? How much progress has been made, and what are the major problems? These questions were the basis for a mid-term report on Oregon's minimum standards prepared by a joint task force of the State Board of Education, the Oregon State Board of Higher Education and the Oregon Educational Coordinating Commission.

The report was issued in July 1977. A "final" report will not be issued until 1982 when all requirements must be met.

Other information on progress and problems detailed below was obtained from responses of Oregon administrators to the **Critical Issues** survey for this report.

Signs of Progress

- The task force report says the following changes in Oregon schools are signs of progress: School districts are devoting more time to needs assessments through community surveys and new ways of communicating with parents.
- Many districts have given increased emphasis to the teaching of writing skills, reading and other subjects.
- Many districts have examined their testing programs and have begun to develop new formats for evaluating student progress. Several districts in Oregon and Washington, for example, have formed a consortium through the Northwest Evaluation Association to develop test items in math and reading.
- Thousands of hours of staff work have gone into the rewriting and defining of curriculum goals.
- Some districts have revised their counseling and guidance systems to better serve students.

Other promising aspects of Oregon's competency based program were pointed out by the Oregon Competency Based Education Program, an NIE funded project. In a survey of Oregon districts it conducted in October 1976, the program found that the most dramatic evidence of the positive effects of the new standards was data on how students will be spending their time. Over 90% of the 105 responding districts estimated that students will be spending more time than ever before talking to teachers or counselors to select courses and working on basic skills areas.

Problem Areas

A major problem in Oregon is the differences among district competencies and programs. The differences, said the task force report, create problems of support, communication and of student transfers to other districts.

One explanation for the differences is that some districts are having a difficult time defining competence. The problem centers around the question, "Competent to do what?" Consequently, the content and the number of competencies vary widely from district to district. The range is from 9 to over 300, with an average of 89. The sheer number of competencies spawns additional problems, the most serious of which seems to be the logistics of record keeping. Educators are complaining about the time, money and energy required to sustain record keeping activities.

There are concerns that minimum competencies are receiving maximum attention, and that this may result in a deterioration in the quality of education, notes the task force report. But, it points out, since grades K-8 must now share responsibility in assuring that students meet minimum competency requirements, emphasis on minimums at the high school level should be reduced.

Measurement and certification problems have arisen due to imprecise definitions of competencies, the inappropriateness of paper and pencil tests to measure some competencies, lack of defining and requiring districtwide adoption of performance indicators, and inefficient record keeping systems.

Some districts have treated the new standards as an add-on to the traditional course requirements rather than integrating them into existing courses and making the curriculum changes the State Board of Education expected and intended.

In some districts fragmented implementation of the state minimum standards has occurred. "It would be desirable to establish goals, write course statements, have reliable measures for each competency and implement remedial programs all at the same time," the task force points out. "However, simultaneous implementation of the standards is difficult to achieve in the real world of an operating school district." It concludes that problems are likely to continue until all competencies are implemented, that is, through 1982.

Oregon administrators who responded to the **Critical Issues** survey for this report reported almost all of the above problems, and some others. A major concern is money. In one district — which requires more than 150 competencies for graduation — the superintendent noted that "fiscal resources will have a major impact on implementation."

Richard E. Lanton, superintendent of Medford School District 549C, was the only administrator to mention a potentially serious problem for every district. He said his concern was the "ability to keep our staff enthused about the changes. This has been a four-year effort for us so far," he noted, "and our staff is becoming weary."

Learn from Oregon's Experiences

States and local districts can learn much from Oregon's pioneering efforts in the competency based movement. As examples, here are helpful pointers from Oregon administrators at the state level:

— Work to solve communications problems at the statewide and district level.
— Imposing statewide standards probably won't work; local districts prefer local control.
— Goal based education (Oregon style) requires "lots of time in planning and evaluation."
— The self-instructional teacher training module developed in Oregon to teach teachers how to im-

plement the program is "one key to success."

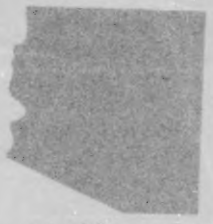
— School districts should be encouraged to work through regional cooperatives or consortiums. "Only about 10 districts in Oregon are deemed capable of handling efforts on their own," said one state official. Oregon has four information centers serving three counties each, where the dissemination strategy is to train trainers who can in turn train others.

— One of the most difficult jobs is the verification of competencies.

— Students probably cannot be checked off on "life role competencies" such as reading a lease as early as sixth grade, as some districts have suggested. "Such skills don't mean anything to students that early."

For more information, the following publications are available from the Documents Clerk, Oregon Dept. of Education, 942 Lancaster Dr., NE, Salem, Ore. 97310: *Elementary-Secondary Guide for Oregon Schools, Part I: Minimum Standards* (free); *Elementary-Secondary Guide for Oregon* Schools: Part II ($2); and *Graduation Requirements Guidelines, Revised* ($2).

Another source of information is the *OSSC Bulletin*, March 1977, on "The New State Graduation Requirements: An Overview and Discussion"; Oregon School Study Council, 124 College of Education, University of Oregon, Eugene, Ore., 97403; $1.50.



Arizona

Ninth grade reading level required for graduation. In January 1976, the State Board of Education mandated that all school districts require students to demonstrate an ability to read at the ninth grade level before graduating from high school. It is up to local districts to determine what constitutes ninth grade level. Another requirement is that students be able to read, write and compute at the sixth grade level before receiving a standard eighth grade certificate of proficiency. Local districts decide how to assess student proficiency in these areas and how to provide alternate learning procedures for students who fail to meet the standards.

Arkansas

Stress on reading. Legislation passed in 1977 directed the State Board of Education to establish educational goals for the state by April 1, 1978. The goals must include minimum performance educational goals for various grades and subject areas, with the first priority to be statewide emphasis on basic skills in reading.

California

The nation's first "early out" test; statewide proficiency requirements starting in grade 4; parent involvement required. In 1975, the California State Dept. of Education implemented the California High School Proficiency Examination, the first legislated "early out" test in the nation. After passing the test, students may leave school immediately, thus bypassing state law which says they must attend until they graduate or reach 18.

The legislation says that all persons 16 years of age and older may take the test, and persons younger than 16 may take it provided they have completed the 10th grade or are at least second semester 10th graders. Parental permission is not required to take the test, but it is required for students to leave school upon passing the test. Students pay $10 to take the test, which is given at approximately 80 testing centers around the state three times annually.

A certificate of proficiency is awarded to those who pass. It is legally equivalent to a high school diploma, but it cannot be used as a substitute for a transcript of coursework nor for performance scores on standardized aptitude or achievement measures. Students who pass the test are eligible for the state's college system. (Some students seeking admittance to the University of California, for example, have taken the test after completing all of the university's course requirements — sometimes as early as the end of their junior year of high school.) Passing the test does not require students to leave high school. If they leave, however, they may return to school at a later date with no penalty.

The proficiency exam tests basic skills, that is, communication skills (reading, writing and language) and problem solving (arithmetic reasoning, computation, and graph and scale interpretation).

The following are examples of typical items included in the California proficiency exam:

Example 1

Write one or two paragraphs explaining why you believe young persons should or should not be required to attend school after reaching age 16. (Time allowed: 20 minutes. Space allowed: approximately ¾ page.)

Example 2

The Point Reyes National Seashore is caught on the antlers of a dilemma.

Within the boundaries of the seashore, a 65,000-acre national park 40 miles north of San Francisco, are two species of deer that from the park's point of view do not belong there.

These are the exotic fallow and axis deer who have made themselves at home on Point Reyes peninsula for nearly 30 years, descendants of 36 animals originally acquired from the San Francisco Zoo.

There are now more than 1,000 deer of both species, and the problem of what to do with them has landed in the lap of the federal government, which purchased the lands on which the deer range in 1971.

These lands are within the pastoral zone for the seashore, where beef and dairy ranching is carried on by ranchers under long-term leasing arrangements with the government.

Unlike the native blacktail deer, the axis and fallow deer are grazers. And there is nothing they like better than nutritious pastures seeded and tended over decades of ranching.

A report by the State Department of Fish and Game warned last spring of a deer population explosion due mainly to the ban on hunting instituted when the government took over the seashore. It predicts a doubling of the herd every two or three years until the land is able to support neither deer nor cattle.

The park's proposed solution is "harvesting" the deer — setting a number to be hunted each year in order to maintain a population which can coexist with the cattle.

1. Which of the following deer is native to the Point Reyes area?
   A. fallow B. exotic C. blacktail D. axis
2. The deer population has increased mostly because of:
   A. more food being available.
   B. more water being available.
   C. a ban on hunting.
   D. more healthy fawns being born.
3. The State Department of Fish and Game predicts that if the deer herd continues to increase, the:
   A. number of cattle will decrease.
   B. number of sick deer will increase.
   C. land will not be able to support either the deer or the cattle.

Example 3

Brand A REGULAR SIZE	Brand A FAMILY SIZE	Brand A GIANT ECONOMY SIZE
1 lb. 50¢	1½ lbs. 66¢	3 lbs. $1.40

Which size of Brand A should a person buy to get the greatest quantity for the least amount of money?

A. Regular Size
B. Family Size
C. Giant Economy Size
D. All cost the same per pound.

Example 4

1 centimetre = 0.01 metre
1 millimetre = 0.001 metre

A ruler is 30 centimetres long. What is its length in millimetres?

A. 3
B. 30
C. 300
D. 3000

The test was developed by the California State Dept. of Education, drawing on such sources as the National Assessment of Educational Progress, the Adult Performance Level Study, Right to Read, locally developed tests, the California Assessment Programs and commercial standardized tests and item pools. Skills are measured by use of items and a short essay during a four-hour examination. Almost none of the questions call for recall of facts. The fundamental rationale is that a student who possesses the basic skills has the tools necessary to learn whatever he sees a point in knowing when he is ready to learn it.

Results are reported on a "pass" or "not pass" basis only, with the minimum passing score set at the average level of a second semester California high school senior.

Of the 60,000 persons who took the test during the first two years it was offered (of the approximately 1.4 million eligible to take it), 18,000 students left school early. In other words, 40% of those who took the test passed it, and three-fourths of those who passed left school early. The early departure of students due to passage of the exam has saved the state about $4.7 million annually in general state appropriations. The amount saved in local appropriations would be fairly similar, according to a state spokesman. For this reason and others, several other states initially were considering adoption of the California test. Now the amount of interest has fallen off.

California legislation also mandates that effective June 30, 1980, no student may receive a high school diploma unless he has met locally adopted standards of proficiency (the word California uses instead of minimum competency). Legislation enacted in 1976 requires that each high school district and unified school district maintaining a junior or senior high school adopt district proficiency standards in reading comprehension, writing and computation. In the following year, a massive education reform law extended the provision, requiring elementary schools to establish similar proficiency standards in the basic skills.

Student progress in meeting the proficiency standards must be assessed once in grades 4-6, once in grades 7-9 and twice in grades 10 through 11. Assessment results are to be used as an indication of attainment of basic skills and for remediation purposes.

The legislation mandates that appropriate remediation must be provided to students "who do not demonstrate sufficient progress toward mastery of basic skills." Students who meet locally set minimum standards once do not have to be reassessed.

The California legislation mandates parent involvement by providing that the district or school staff must hold a conference with the student, his parent and a teacher who knows the student to discuss assessment results and proposed remediation. The legislation says a secondary student should attend the conference along with his parent, but attendance of an elementary student at such a conference is at the option of the school and parent. In either case, the parent must be requested in writing to attend the conference. If no answer is received, the school must make a reasonable effort to contact the parent or guardian by telephone.

Although the proficiency standards are to be set locally, the legislation instructed the California State Dept. of Education to prepare and distribute to schools "performance indicators" in addition to examples of minimum academic standards for graduation and a framework for assessing pupil proficiency in reading, writing and computation skills.

The new law opens the door to flexibility by requiring districts to adopt "alternative means" for students to complete the prescribed courses of study (which still include English, American history, government, math, science and physical education). Suggested "alternative means" include "practical demonstration of skills and competencies, work experience or other outside school experience, interdisciplinary study, independent study and credits earned at postsecondary institutions."

The California State Dept. of Education advised that "some districts may see the legislation as a point of departure from which to move beyond its specific legal requirements toward, for example, a restructuring of local instructional programs." It notes, however, that the wisest course initially for districts to follow may be to keep the process simple because of logistic problems in meeting the legislative requirements in the specified period of time. "It would be wise for districts . . . to be reasonable in initially adopting a limited number of proficiencies in each of the required skill areas, for which they can develop manageable pupil assessment and monitoring procedures," notes a *Technical Assistance Guide for Proficiency Assessment*. The guide was prepared to help California school districts meet new legislative mandates on proficiency requirements.

For information on the guide, write to Publications Sales, California State Dept. of Education, P.O. Box 271, Sacramento, Calif. 95802.

Delaware

Emphasis on instruction in lower grades; promotion based on achievement. The State Dept. of Public Instruction started to develop basic skills competencies for high school graduation in answer to a directive from the State Board of Education. However, the board shifted the emphasis to basic skills and to improving instruction in the lower grades. Districts were asked to revise their promotion policies by basing promotion on student achievement by May 1978 for elementary grades and by June 1979 for higher grades.

Florida

The nation's first statewide use of a functional literacy test as a requirement for high school graduation; compensatory education funding tied to test scores. Florida's ambitious testing program in the basic skills reached all students in grades 3, 5, 8 and 11 in 1977. Of particular interest to the nation as a whole were the results of a functional literacy test, a 117-question test of reading, writing and mathematics. Passage is required for high school graduation starting with the class of 1979, making Florida the first state to try out the idea of requiring evidence of functional literacy for high school graduation.

First administration of the test to the state's 100,000 eleventh graders — the class of 1979 — took place in October 1977. A passing score of 70% was required on the test, which for the purposes of scoring was divided into two parts, communications and math. Passage of one part of the test means that students do not have to take it again. As predicted, the failure rate in some districts was in excess of one-third of the students. Early returns showed the failure rate on both parts of the test was highest in predominantly black schools and that many more students failed the math section than the one on communications. The communications skills are geared to a seventh grade level, the math to an eighth grade level. The math section, which tests everyday skills such as balancing a checkbook, was said to be "too hard" by some school administrators.

Florida legislation says students are to get three chances to pass the test. Failure all three times means that students must be given a certificate of completion instead of a high school diploma. Officials estimated that 5 to 7% of Florida students will still be unable to pass the test by the time they are scheduled to graduate.

Florida's Educational Accountability Act of 1976, which contains the requirement of functional literacy for high school graduation, also specifies minimum requirements for lower grade levels. It has been called "the most comprehensive minimal competency testing legislation enacted in 1976." Among the legislation's broad intents are to guarantee that each student will receive instruction enabling him to meet the state's minimum performance standards and to provide information to educators, legislators and community about school district effectiveness in enabling students to meet minimum standards and program costs.

One portion of the act specifies that districts are to emphasize basic skills starting in the earliest grades and that they are to provide early childhood and basic skills development programs. Each school district was required to set local goals and objectives to supplement the state's minimum standards. They must stress basic skills.

The state's minimum standards are written two ways: in terms of "standards" to communicate primarily with the general public, and in terms of "skills," to communicate with teachers and curriculum specialists. As an example, by the beginning of the third grade, the student should be able to meet this minimum standard: "The student will acquire a basic vocabulary as determined by a specified word list." The minimum skills required of a third grader to demonstrate that standard are "to identify words selected from the Dolch 220 list" and " to associate words with words of opposite meaning." There are 13 minimum standards and 15 basic skills required of a third grader in reading.

Minimun standards are provided in reading, writing and mathematics at the four grade levels tested in Florida's statewide assessment program. The Florida Dept. of Education says the standards were developed and reviewed according to three criteria:

- Achievement of the skills is reasonable for every student in basic education programs who has appropriate instruction and motivation and who is not impaired by a mental or physical handicap.
- The highest skills (usually grade 8 or 11) realistically specify the maximum skills needed by the student to perform effectively the reading, writing and mathematics tasks required for everyday living.
- Achievement of skills at each grade level is necessary for the student to make normal progress toward the desired highest level skills.

The legislation mandated that districts establish pupil progression programs that are compatible with the minimum standards. Students are not to be promoted from grades 3, 5, 8 and 11 until they have mastered minimum basic skills. Statewide tests of basic skills given in those grades are to be used for diagnostic purposes so that students can be provided appropriate remediation.

The state's new compensatory education program is aimed at helping districts and schools provide remediation to students unable to meet minimum standards. The legislature appropriated $10 million to fund the program during the 1977-78 school year and $26.5 million for the following year. During the first year of implementation, most districts reportedly were using the funds to bring 11th graders up to minimum standards in preparation for high school graduation.

Starting in September 1977, Florida also offered students who are between 16 and 18 years of age the option of leaving school prior to graduation. Students must pass a high school equivalency test, the GED (tests of General Educational Development). The test is written at the ninth grade reading level, has five sections (reading, writing, math, social studies and science); and takes 10 hours to complete. Students pay a $10 fee.

They must have parent permission to take the test. In addition, they must have a conference with the school principal or his designee to review their academic career and job possibilities. Students who elect to take the test and pass it must leave school and cannot return.

Georgia

Adapting Oregon's competency program; pilot testing in 10 districts under way. Several proposals before the state legislature were withdrawn due to action by the State Board of Education in November 1976. Ten volunteer districts agreed to test a new board policy on graduation requirements, which increases to 21 (formerly 18) the number of credits required for graduation. The credits, composed of half electives and half requirements, include units in communication skills, mathematics, health and safety, physical education, laboratory science, citizenship, local, state and national government, principles of economics, business and free enterprise, personal finance and career planning and entry skills. Under the new policy, local school systems are given flexibility in scheduling class periods, waiving attendance requirements, requiring additional credits and offering credits for planned off-campus experiences. School districts set their own student performance objectives and performance indicators and plan their own course descriptions. Adoption or adaption of the 10 pilot models is expected to take place in all Georgia districts, starting in 1978-79.

Idaho

Revised graduation requirements; optional proficiency testing; a special diploma from the State Board of Education. In February 1977, the State Board of Education revised graduation requirements by adding an additional credit in consumer economics. It is to include practical skills involving money management, banking investments, insurance, income tax and comparison shopping. Students are also required to take a course in composition during their last two years in high school. The class of 1981 is the first affected by the new requirements. Districts also were given the choice of participating in a new state proficiency test

program, starting in the fall of 1978. The tests cover math, reading, composition and spelling. Districts opting to participate in the program, starting with ninth graders, are required to continue tutorial and remedial services for students found deficient until such time as they successfully demonstrate the competencies tested or they graduate. Students who pass the proficiency tests shall be recognized by having the board's seal placed on their diplomas. No student will be denied a diploma for failure to pass all parts of the test.

Maryland

Grade to grade promotion based on attainment of minimum reading levels; statewide emphasis on functional literacy. The legislature required the State Board of Education to prescribe, by July 1977, a minimum level of reading ability for grades 2-12, with the level set progressively higher for each succeeding grade. Students in grades 2-7 who cannot meet the minimum reading level established for the particular grade must be retained or enrolled in an appropriate reading assistance program. But students cannot be retained more than once in grades 2-7 for that reason. Exempted from the legislative provisions are students enrolled in special reading assistance programs and those performing up to their reading capacity as determined by guidelines adopted by local boards in accordance with state bylaws. Also exempted are students with physical or mental handicaps which affect their ability to read.

A separate initiative, taken by the State Dept. of Education, made Maryland the first state to establish a basic functional reading program. It assesses functional literacy through a criterion referenced test called the Maryland Functional Reading Test. First used in December 1975, the test is administered each fall statewide to students in grades 7 and 11 and, at the district's option, to students in grade 12.

The materials used to determine functional literacy were chosen following the identification of "basic survival reading needs" by more than 2,000 Maryland citizens, including 100 illiterates. The materials are organized into five categories: following directions, locating references, gaining information, understanding forms and attaining personal development. Examples of materials used to teach and test the first four categories are indicated in the sample. The fifth category — attaining personal development — is a measure of student time spent in reading, attitudes and preferences in reading materials.

Functional Reading Categories and Instructional Materials Used in the Maryland Functional Reading Test

Grade 7

Category I Locating References	Category II Understanding Forms	Category III Gaining Information	Category IV Following Directions
Atlas Index	Cereal Coupon	Weather Map	Game Rules
Newspaper Contents	Grocery Tape	Vocabulary	Real Estate Map
Almanac Index	Club Form	Grocery Ad	Symbol & Signs
Trade/Text Index		Soap Coupon	School Schedule
Dictionary		Menu	Study Rules
Telephone Directory			First Aid Rules

Results of the first administration of the functional reading test show that 65% of grade 7 and 80% of grade 11 students achieved the minimum competency level, that is, they could answer at least 80% of the questions correctly. In addition to statewide results, the state also prepares test results and interpretation of scores at the school system, school building and individual student level. See the sample.

Number and Percentage of Items Answered Correctly by Each Student (Sample)

Student Name	Functional Reading Categories									
	Locating References (30 Questions)		Understanding Forms (21 Questions)		Gaining Information (29 Questions)		Following Directions (35 Questions)		Total Test (115 Questions)	
	No.	Percent	No.	Percent	No.	Percent	No.	Percent	No.	Percent
A. Smith	20	66.6	21	100.0	24	82.7	26	74.3	97	84.3

That kind of interpretation of scores is intended to help teachers plan each student's instructional program. In addition, every school and district are expected to use the information provided by the reading assessments to implement and improve the functional reading component of their reading programs.

Statewide, the goal is to have all students reach the desired competency level in reading by 1980. A functional mathematics test is being developed by the State Dept. of Education. And, by 1982, students will have to meet minimum competency standards for high school graduation.

New York

Passing five basic competency tests required for graduation in 1980. In March 1976, the New York Board of Regents adopted a policy requiring all high school students to successfully complete adult basic competency tests in reading and mathematics before they receive a high school diploma. The requirement takes effect starting with the graduating class of 1979.

The policy was amended during 1976-77 to include competency tests in civics and citizenship, practical sciences and health, and writing skills. Successful completion of all five tests is required for high school graduation in 1980. This requirement is in addition to all other local and state graduation requirements.

The New York Basic Competency Tests are designed to measure the minimum skills and capabilities that are required of adults to function adequately in modern society. The tests deal with skills and understandings that most adults would be expected to use competently at some time in their everyday living. The passing score on each test is 65%.

Each test, except for the one on writing skills, contains 40 to 50 multiple choice questions. Here's a general description of test content:

- **Reading**: The reading test measures comprehension of materials that most adults read, such as ads, directions, timetables, menus, letters and newspaper articles.
- **Mathematics**: The mathematics test measures knowledge of basic mathematics concepts, computational skills and problem-solving ability. The questions involve basic addition, subtraction, multiplication, division, simple percentages, fractions and linear measurements.
- **Practical sciences and health**: The practical sciences and health test measures knowledge of basic science concepts in the four areas of biological, earth, environmental and physical science. The questions involve such health-related topics as nutrition, disease, drugs and alcohol, first aid and community health problems.
- **Civics and citizenship**: The civics and citizenship test measures knowledge of and understanding of global citizenship, the structure and functions of the various levels of government in the United States, constitutional rights, citizenship responsibilities and the structure and operation of our economic system. The test includes questions on such topics as the duties of the legislative, executive and judicial branches of government, the political party system, the electoral processes, rights and responsibilities of individual citizens, relationship of labor and management, taxation and consumer economics.
- **Writing skills**: The writing skills test measures ability to write acceptable sentences and coherent paragraphs, along with a demonstration of familiarity with the mechanics of writing, such as spelling, punctuation, usage.

The basic competency tests, which are printed and distributed by the State Dept. of Education, are administered twice each year. New tests are prepared for each administration. The department did not set the specific grade level for

the initial testing, but it recommended that all ninth graders be tested. The rationale was that by testing ninth graders, schools would have the opportunity and the information to meet individual needs of those students who were unable to attain passing scores on their first testing. Student who do not attain a passing score on their first try must retake the test(s) until they achieve a passing score. They may retake the test(s) as often as necessary on subsequent test dates, usually January and June.

Pennsylvania

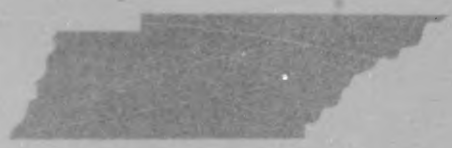
A five-year effort to identify competencies is under way. Starting in January 1976, this state launched Project 81 — an effort that could result in education changes comparable to those being attempted in Oregon. The approach being used is somewhat different, however. Rather than involving every school district, Project 81 was started in 10 model districts and two consortia made up of groups of districts. Initially, their charge was to identify the skills, knowledge and attitudes students need to become functional adults. Community members, teachers, administrators and students were to be involved in the process. Tentatively, the model districts were told to think about basic needs in four "life role" areas: home life, citizenship, work and leisure. These areas in turn were tentatively broken into the basic skills areas of writing, speaking and listening, computation, problem solving, physical dexterity and interpersonal relations. Then, they were translated into competencies.

Judy Bauer Zaenglein, the director of the project, says the competencies that were generated in the model districts are comprehensive in nature and go beyond the three R's. They are being validated through a statewide survey.

The next step for the model districts is to identify resources in the community that may help to teach the validated competencies and to develop a system of making the competencies a part of the state's graduation requirements.

The pilot work by the model districts and consortia, says Zaenglein, hopefully will enable other Pennsylvania districts to use what has been developed and adapt it to their specific needs. The idea is to find out in a small number of districts what kinds of changes are required in a massive education reform effort — changes such as how to handle the stresses and paperwork, how much and what kinds of retraining are needed for teachers and administrators, and how best to communicate the changes and involve the community in making them.

"Preliminary evidence from the project shows that it is likely that Pennsylvania will be requiring attainment of specific competencies for high school graduation," says Zaenglein.



Tennessee

Trial run of the Denver proficiency test. In the spring of 1977, the Denver proficiency test was given to 4,250 seniors in 27 Tennessee high schools. The pilot testing was mandated by the State Board of Education to determine whether testing of basic learning skills should be required statewide. The results: 31% of the students failed the mathematics portion of the test, 10% failed spelling, 21% failed language arts, 15% failed reading comprehension and 23% failed reading-vocabulary.

Sam H. Ingram, state education commissioner, said he was not surprised at the results of the pilot test, although he was not pleased. "I think it would be wrong for the public to believe we can support education at the level we have and compare favorably with other school systems in the nation." He called for the adoption of minimum requirements for graduation because, he said, "we can guarantee that our youngsters will get some attention and special help with basic skills that they have not been getting in the past."

Vermont

A small state sets statewide competencies. Vermont, the third smallest state in terms of enrollment, launched a statewide basic competency program in 1973. At that time, the State Dept. of Education started to gather lists of objectives in mathematics from educators and citizens. Next, basic competencies were validated and then submitted to teachers across the state for discussion and revision. A similar process was followed to specify basic competencies in language arts (reading, writing, speaking and listening).

The basic competencies in each area were field tested in Vermont classrooms. They were approved by the Vermont Board of Education in July 1976. Basic competencies in reasoning will be adopted by the board as soon as field testing and revisions are completed.

So far, the board has adopted 8 specific basic competencies in reading, 8 in writing, 7 in speaking, 3 in listening and 25 in mathematics. Some of the competencies require that students must have the skill before being given credit for it; others provide some leeway by stating that 80% accuracy is sufficient to demonstrate competency. Examples follow:

Reading

- Given material written in manuscript and in cursive form, the student will demonstrate ability to read both forms.
- Given a list of words vital to safety, including road and traffic signs, the student will identify them with 80% accuracy.
- Given directions to read and summarize short factual articles, the students will respond by writing a brief summary which includes a main idea and at least three supporting statements.

Writing

- Given a list of words which are commonly misspelled, the student will spell them with 80% accuracy.
- Given directions to write a business letter, to fold it and to address the envelope, the student will do so with no errors in form, grammar or punctuation.

Speaking

- Given directions to explain a process, make a report or express an opinion, the student will do so, demonstrating organization, sequence, clarity and accuracy.
- Given a simulated situation, the student will demonstrate ability to answer a business telephone correctly and to take a message.

Listening

- Given oral directions to do a task involving at least three steps, the student will listen to the directions once and follow them with 100% accuracy.

Mathematics

- Given directions to count to 100, the pupil will recite the numerals from 1 to 100 in the usual order with no mistakes.
- Given a simple bar or line graph, the pupil will read and interpret.
- The pupil will use the prefixes centi, milli, and kilo correctly when using metric units.
- Given an amount of money and directions to make change from $10.00 ($1.00, $5.00), the pupil will find the correct change using actual coins or play money.
- Given two numbers, each with at least three digits and the decimal points in any position, the pupil will find their difference with 80% accuracy. The numbers shall not be given with the decimal points aligned, and the subtraction shall require borrowing.
- Given proper fractions with denominators of 2, 4, 5 and 10, the pupil will give the equivalent decimal with 80% accuracy.

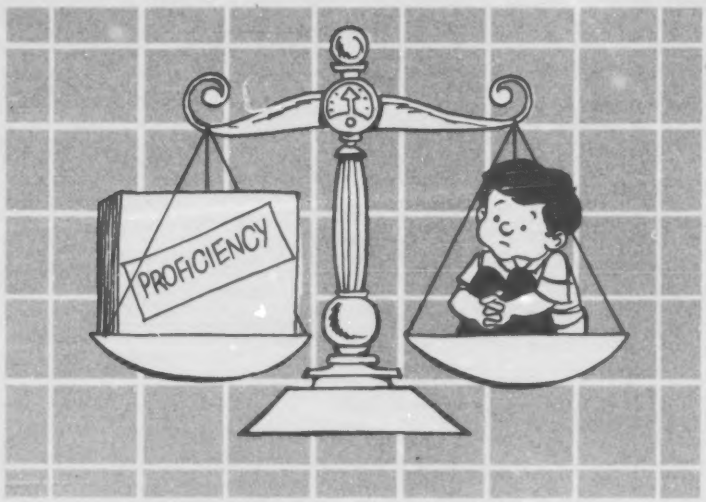
The State Board of Education stipulated that mastery of all of the basic competencies is required for graduation from high school, starting in 1981. Students who have a limiting handicap may complete an "approved, comprehensive, multi-year plan" in lieu of the competency requirement.

Districts must determine at the local level the proper kind of instruction and assessment to assure that students can meet the minimum requirements. A guide for teachers prepared by the State Dept. of Education notes that all teachers share responsibility for developing abilities that can lead to competency. It also says each school system is expected to develop a curriculum guide which clearly indicates where skills related to the competencies are introduced, practiced, tested and reviewed and that each district is expected to reach agreement on the materials used for assessing mastery.

All teachers are required to maintain a progress record of each pupil's mastery of the basic competencies. The progress record, in the form of a folder, is provided by the State Dept. of Education. Competencies are listed individually inside the folder, with space for teachers to specify when each is mastered. Superintendents are required to submit an annual tally of all competencies obtained by students in their districts. The data will be used by the legislature "to make decisions on the budget and educational legislation" and by the State Board of Education to "form policy, make recommendations and provide services to local school districts." The State Dept. of Education advises local districts, moreover, to use the data "to evaluate school programs, to develop appropriate modifications and activities, to allocate resources, to overcome weakness and to support areas of strength, and to assist in the development and justification of local school budgets."

CHAPTER VIII

What's Happening in Local Districts



Efforts to set minimum competency standards have resulted in numerous approaches to the problem:

- Requiring students to demonstrate competency for high school graduation.
- Requiring students to demonstrate competency for [illegible] to grade promotion.
- Alternate approaches to granting credit for high school graduation.
- Alternate approaches to establishing competency.
- The use of different types of diplomas/certificates.

A variety of case studies have been selected for this report to illustrate how districts of different sizes and locations are responding to legislative mandates or taking independent actions.

High School Graduation Requirements

High school graduation requirements are changing. The methods are different, but the purpose is the same: to require students to demonstrate minimum competency in basic skills prior to receiving a high school diploma.

Districts are making diverse requirements. The Denver Public Schools requires students to demonstrate competency in reading, language, spelling and arithmetic. Los Angeles, on the other hand, tests how well students can apply those skills to daily living.

Most school districts require students to pass tests with scores equal to eighth grade competency. But one of the districts — West Milford Township, N. J. — raised the level to ninth grade.

Some districts have come up with alternatives to passing competency tests. One district described below allows students to receive credit for remedial courses; another allows a student's parents to invalidate its competency requirement.

The following case studies are drawn from responses to the **Critical Issues** survey:

Denver Public Schools

Minimum high school graduation requirement: competence at the eighth grade level in reading, language, spelling and arithmetic. This district has had more experience with minimum competency testing than any other school system in the country. And, in one 12-month period, it had more than 1,900 inquiries about its tests.

The testing program — called Proficiency and Review — was started in 1960. Two years earlier a public opinion survey of 400 business and industrial employers in Denver revealed that the validity of the high school diploma was being questioned. Employers were concerned that some graduates lacked competence in basic skills.

The superintendent and the board agreed that students should demonstrate at least a basic level of competency before being given a high school diploma. To achieve that goal, the district developed minimum competency tests in four areas. They measure:

- **Numerical proficiency**. This test measures students' ability to add, subtract, multiply and divide and to apply these operations to whole numbers, fractions, decimals and denominate numbers. Basic concepts also are tested, including conversion of fractions, decimals and percents, computation of percents; determining relative sizes of numbers in lists of fractions and decimal numerals; and expressing large numbers and monetary amounts in numerals. The test contains 50 multiple-choice items.
- **Spelling proficiency**. This 50-item multiple choice test measures students' ability to recognize the correct spelling of words. Most of the words are those eighth graders are expected to know. The words are printed in script to resemble handwriting.
- **Language proficiency**. This test is designed to measure ability to recognize correctly written English. Students proofread two compositions written in 50 lines of script. They are asked to find errors in punctuation, capitalization or grammar. About 10 of the lines contain no errors.
- **Reading proficiency**. This test is divided into two sections. It measures reading comprehension and vocabulary. The reading comprehension section consists of three short reading passages, followed by eight statements each. The passages are considered to be of general interest to teen-agers. They must recognize details in the passages and draw simple inferences. The level of difficulty of the passages, as calculated by the Dale-Chall Readability Formula, is about the 8.5 grade level. The 26-item vocabulary section of the reading test measures ability to recognize synonyms. Most of the words are not above eighth grade difficulty; they are words commonly used by adults. The grade level for each word was established by using the basic vocabulary and advanced vocabulary word lists prepared by Educational Developmental Laboratories, Inc.

The tests are given twice a year, starting in the ninth grade. This means that students have eight chances to pass the tests through grade 12. Taking the tests is voluntary. But students cannot receive a high school diploma unless they take and successfully pass all four tests. Failure to do so means they will be given a certificate of attendance.

Three alternate forms of each test are available and, for security reasons, schools do not know which form of the test they will be giving during which testing period. The last revisions of the tests were made in 1970, but the district plans to revise them soon, says Allan Hosler, supervisor of testing.

Failure rate: Hosler says the failure rate ranges from 20 to 35% for students leaving the ninth grade. They were given two opportunities to take the tests. The highest failure rate is usually recorded in spelling or math. By the time students are ready to graduate, only about 1.5% fail to receive a diploma due to their inability to pass the tests or their unwillingness to take them in the first place. The district serves approximately 71,000 students, 47% of whom are white, 21% black, 30% Spanish surnamed and 2% other.

Remediation: The district allows each school to determine how remedial services will be provided. It distributes computer printouts of test returns so that individual schools can pinpoint where they should concentrate efforts schoolwide as well as with each student. Parents and students also are given information on test scores and areas of deficiency. Remediation is voluntary for students. Some schools provide remedial services within regular classes; others offer separate classes or labs during free periods. Worksheets also are available to all students to reinforce basic skills.

New directions: The district is developing tests in the same four areas as used in grades 9-12 for administration to students at the end of grades 3 and 6. They will be considered "checkpoint tests" with no penalty for failure. The idea is to spot deficiencies and provide remediation earlier in students' school careers. The tests should be ready for use in 1978-79.

What can be learned from Denver's experience? Hosler offered this advice in an interview for this report:

- Districts should decide on an individual basis whether to adopt minimum competency tests. He notes, however, that required minimum competency "is in the wind."
- The decision of whether to test the "basics" or to test "survival" skills should rest with the district and the community it serves. (Denver is considering the inclusion of survival skills in coming revisions to its tests.) Hosler notes that suburban communities may request that survival skills be tested on the assumption that most students in those areas would already know the basics but could have trouble in applying them. Districts may also have to consider cost in deciding whether to test "basic" or "survival" skills. A test of "basics" could be used for many years without revision. However, a test of "survival" skills would need more frequent revision because of the changing definition of survival.
- It is important to inform and sell minimum competency standards to the faculty when a district decides to adopt them. An effort to adopt competency standards can be sabotaged if staff members refer to them as "dumb tests."
- Students, parents and the community must be made aware of what the requirements are and what they mean. "Opposition from parents and community usually turns into support once they understand what the tests require of students."
- Districts could expect to pay $1.50 to $2 per child per administration of a commercially developed test. This includes buying the test and administration costs, including scoring. Districts, of course, would have to find a test that is both suitable and acceptable. If, on the other hand, a district chooses to develop its own tests, it should allow *at least* two years for development, pilot testing, working with the faculty and community and putting the test in final form. Taking four years to develop and implement a test is not unlikely.
- Youngsters must not see the tests as a "high hurdle" they must get over. Remediation must be handled with care and be considered important. The ideal situation is when *all* staff members acknowledge that assisting students to become competent in basic skills is part of their job. This alleviates the situation of the eighth grade English teacher who feels like a failure because some students fail the tests.

- One way to figure remediation costs is to compute the average teacher salary and the number of students a teacher would work with each day. For example, if a teacher is assigned 15 students in a remedial class five sessions a day, the cost for remediation for 75 students for one semester would be one-half of the average teacher salary per year. The cost of supplementary materials would have to be added.
- Due to the importance of the tests in deciding whether students receive a high school diploma, they should be given early in students' schooling. (Initially, Denver tested students starting in the 11th grade. But that's too late, district administrators now believe.)

For more information, contact Allan Hosler, Supervisor of Testing, Dept. of Development and Evaluation, Denver Public Schools, 900 Grant Ave., Denver, Colo. 80202.

Los Angeles Unified School District

Passage of a reading test required for high school graduation in 1979; math and writing tests added for class of 1981. This district established a policy in 1975 requiring all students to pass a test of reading proficiency before receiving a high school diploma. The district developed the objectives, the system and the test, which is called SHARP (Senior High Assessment of Reading Proficiency).

Following passage of state legislation mandating assessment of student proficiency in reading, writing and computation, the district also started to develop its own proficiency tests in the latter two areas. Students must pass all three tests to receive a high school diploma, starting with the class of 1981.

The reading test has three parts and deals with reading materials that adults use every day. The three parts and examples of each:

- **Can you follow directions?** This section includes such items as driver's tests, library cards, job and rental applications, letter writing.
- **What's in it?** This section deals with reading signs, labels, dictionaries, newspapers, credit applications and check writing.
- **What does it mean?** This section requires students to demonstrate competence in reading and understanding road maps, bank statements, income tax forms, job resumes and TV guides.

In addition to spotting student deficiencies, the district uses the test to motivate students to use a series of mini courses keyed to the same objectives as the test.

Students take the reading test as 10th graders. If they pass, their cumulative record is so labeled, and they go on with the regular curriculum. If they fail they continue with the regular curriculum, but they are exposed to the three minicourses during the 10th grade or during summer school. The courses can be taught in one 50-minute period per day over a period of 10 weeks. The district furnishes the materials for the minicourses in the form of kits to each school, but scheduling the courses is up to the individual school.

Students who do not pass the reading test are rescheduled for testing the following year with the new 10th graders. Repeaters take a different test each time, because a new, parallel edition of the test is published each fall. The procedure continues in this way so each student has up to four opportunities to take and pass the test, the last opportunity being the spring semester of the senior year.

The math test, to be administered the first time in the fall of 1978, will check student competency in eight categories of practical application: banking, personal expenses, measurement, money, pricing, taxes, wages and whole numbers.

The test on writing is still under development. Two other testing programs, in reading and math at the junior high level, were developed by the district to identify students who need remedial help in basic skills at that level. Achieving a particular level of skill on the tests is not a condition of promotion to the next highest grade level.

The tests and the instructional materials developed to reinforce students knowledge in the areas tested are being commercially published by McGraw Hill. The school district will receive royalties from sale of the publications.

For more information, contact Walter J. Lansu, Administrator, Los Angeles Unified School District, 450 N. Grand Ave., Los Angeles, Calif. 90012.

Westside Community Schools, Omaha, Nebr.

Competency tests in seven areas required for high school graduation. A long-range planning committee at the Westside High School recommended during 1972-73 that the district maintain traditional graduation requirements and also require students to pass competency tests in nine areas. Two of the proposed areas of competency — use of leisure time and career education — subsequently were eliminated. But seven survived: reading, writing, math, the democratic process, problem solving, oral communication and consumerism.

Tests in five of the competency areas were developed by district staff. Reading is tested through use of the Gates-MacGinite Reading Test-Survey E. Oral communication requires students to make an oral presentation that is judged by a teacher according to specific criteria. It is the only assessment of the seven that is not a paper and pencil test.

On four of the tests, students must get a certain number of items correct to pass. For example, students must get 36 of 40 items right on the consumer test and two out of three problems right on each of the 17 math competencies tested.

The tests are given at various times: reading in ninth grade; oral communication, writing and consumerism in 10th grade; and math, democratic process and problem solving in 11th grade. Students are given as many opportunities as required to pass; remediation (tutoring) is available to help students pass makeup tests.

"The program does not pretend to be more effective than regular classroom instruction," says Jim Findley, assistant

principal of Westside High School, in an evaluation of the program in *Catalyst* (published by the Nebraska Council of School Administrators). "It simply provides a tool for the district to give certain students more help in basic areas than they would have otherwise received," he adds.

Findley considers the tests as "a motivator" for some students who would otherwise avoid reviewing basic skills in high school.

The program's major weakness, says Findley, is "consistent identification of students lacking competencies in certain areas." As an example, he cites the oral communication competency. It is administered by a large number of people — which sometimes results in inconsistent interpretation of students' presentations.

Three problems identified by Findley are record keeping and other paperwork, the fact that "many students see the competencies as a waste of time," and maintenance of the program. To illustrate the last problem he said that test items, implementation procedures and remedial programs have been changed in six of the seven competency areas each year between 1973 and 1977.

The results of the testing: Almost every student in the class of 1977, the first one facing the new graduation requirement, passed. Nine seniors out of 786 failed to graduate because they had not completed course requirements, but only 5 failed because they did not pass the competency tests.

For more information, contact H. Vaughn Phelps, Superintendent, District #66, 909 S. 76th, Omaha, Nebr. 68114.

Lewis Central Community Schools, Council Bluffs, Iowa

Minimum competency in reading and math, measured by commercial tests, required for graduation in 1980. This district, which serves approximately 2,900 students, adopted a policy which raises the number of required academic units students must have to graduate and sets minimum standards.

Thirty-nine academic units will be required in 1980, compared to 36 in 1977. In addition, students graduating in 1980 must demonstrate minimum competency in reading and math. Competency is defined as standard scores of 8 on the reading and quantitative thinking subtests of the Iowa Test of Educational Development.

Students must take the tests in their freshman year. Those who receive less than the required standard are guided into classes specially designed to remediate their weaknesses. Students who score at or above the established minimum during their freshman and sophomore years must maintain this score when they take the tests as juniors to be eligible for graduation.

Minimum competency standards are waived for students who qualify for mentally handicapped special education classes or who have learning disabilities which would make the minimum standards unreasonable for their ability.

For more information, contact James L. Smith, Superintendent, Lewis Central Community Schools, 1600 E. S. Omaha Bridge Rd., Council Bluffs, Iowa 51501.

West Milford Township (N. J.) Schools

Eighth grade minimum competency in academic subjects in 1976 raised to ninth grade level in 1977. This district's Board of Education decided in 1974 that students graduating two years later should demonstrate competence in reading, mathematics, language arts and science, in addition to meeting state graduation requirements.

Unable to find a suitable criterion referenced test, administrators in the 5,500-student district decided to use the California Achievement Test and the science portion of the California Test of Basic Skills. They arbitrarily set an 8.0 grade level equivalent as the minimum acceptable level of competency on the tests. Students with IQ's below 90 were exempted from the minimum requirement.

The results of the first year's testing showed that from 77 to 89% of 340 students passed the district's competency tests. As an example, 89% of the students reached the 8.0 grade level in the science test; 77% did so in math, as did 82% in language arts and 87% in reading. Those identified as having an IQ below 90 were given an individual program. All others were brought up to the minimum acceptable level. One extra instructor was hired, at a cost to the district of $5,760.

The district raised the minimum acceptable level to a 9.0 grade equivalent for the class of 1977. Approximately 20% of those tested needed remedial help or were given individual programs. All students but one in the remedial program were brought up to the minimum, at a cost of the salary of one supplementary instructor.

James F. Gleeson, the district's director of secondary education, says "the minimum standard of 9.0 appears to be achievable for most similar rural-suburban districts." He believes that the approach motivates students and is supported by parents. The disadvantages, he says, are that "some teaching to the test is inevitable" and that "some students drift back to lower standards."

For more information, contact James F. Gleeson, Director of Secondary Education, West Milford Township Schools, 46 Arnold Rd., West Milford, N. J. 07480.

Syracuse (N.Y.) City School District

Eighth grade level in reading and math required for graduation. Since June 1975, this school district has required that students must demonstrate proficiency at the 8.0 grade level in reading and math in order to graduate. Exempted from these minimum competency levels are special education students. They are evaluated individually.

Under district guidelines, any credible (valid and reliable) standardized achievment test is acceptable as evidence of pupil performance at the required eighth grade level.

The district also uses checkpoints at the end of the primary, intermediate and eighth grade level to "insure that

students are progressing at a rate that would enable them to function at a minimum competency level in reading and math at least by the end of the 12th grade." It notes that a total of two additional years in the elementary school and one additional year in the junior high school could be used to accomplish minimum proficiency in reading and math. It recommends that additional time be provided at the time it is needed rather than waiting until the end of the primary, intermediate or eighth grade.

The guidelines advise schools that the factors to be considered in retaining students include mastery of learning skills and the advice of parents and instructors. Classroom teachers, in consultation with the district's pupil service team, are expected to identify students who are not making sufficient progress for advancement to the next higher learning level. Notification of parents of students in grades 9-12 who are below minimum competency levels must be mailed in November.

Students continue to take qualifying tests annually until they meet the required eighth grade levels. If, in grade 12, students still have not passed the tests, special remedial courses must be offered.

James M. Zatlukal, director of secondary education, says the requirements have had "good effects" on the district because they force students to be responsible. The district serves approximately 27,000 students.

For more information, contact James M. Zatlukal, Director of Secondary Education, Syracuse City School District, 409 W. Genesee St., Syracuse, N.Y. 13202.

Manitowoc (Wis.) Public Schools

Proficiency tests replace specific courses as requirement for high school graduation; more opportunity for students to choose electives. The Manitowoc Board of Education adopted new graduation requirements for its three-year senior high school in January 1976. The adoption was prompted by excessive absenteeism in the last two years of high school and the desire to raise graduates' competency in basic skills. Another factor was the district's interest in giving students more choices in how they fulfill course requirements.

The new policy allows proficiency tests to replace required courses in social studies, English/language arts and science, starting in 1979. Students who can prove their competency by taking a proficiency test do not have to take specific courses in these areas; consequently, electives are encouraged.

The district, which serves 6,500 students, explains the change this way: "The basic philosophy behind the proficiency tests is the same as that which prompted the inclusion of required courses in the past. Some basic skills or understandings should be a part of everyone's education. Instead of the required high school courses which imply that these skills and understandings are not learned until the students takes specific courses at the high school level, the proficiency tests will not be concerned when or where these skills were learned, as long as the student possesses them."

The tests are being developed by district staff over a four-year period. Emphasis is on life skills needed "to deal effectively with the problems and requirements of daily living."

Students who successfully take the proficiency tests in social studies, English/language arts and science will still be required to earn the same minimum number of credits in these areas as previously. But they will be free to choose from any available electives in each area. For example, instead of being required to take "Sophomore English," students could fulfill requirements in that area by passing the proficiency test and by taking an English elective. The requirements are: 2 credits in English, 2 credits in social studies, 1 credit in science, 1½ credits in physical education and 7½ credits in electives.

Math is not a required course for high school graduation. But students must pass a proficiency test in basic mathematics. A student who does not pass the test may retake it later until successful, or he may enroll in a remedial course. Students who pass the course do not have to take the proficiency test again.

So that students do not fritter away their electives, district administrators say suggestions on electives will be clearly outlined for students entering the work field or planning to continue their education.

The district concludes that if its new requirements suggest "that the goal of education is solely to achieve the minimum level tested in the proficiencies, these requirements would do students a disservice." High school education, it says, should also be:

- An exploration of areas of knowledge, whether in traditional academic areas or in art or industrial arts.
- A challenge to encourage the intellectual growth of students.

The increased elective opportunities will help this exploration and growth, the district believes.

For more information, contact Vernon C. Childs, Superintendent, Manitowoc Public Schools, 1514 S. 14th St., Manitowoc, Wis. 54220.

Austin (Tex.) Independent School District

Eighth grade competency in reading and mathematics required for high school graduation; parents can invalidate the requirement. This district allows students three options in meeting the requirement of eighth grade competency in reading and mathematics:

- "Achieving a score on the eighth grade administration of the California Achievement Test which represents national median performance for eighth grade students.
- "Achieving the raw score equivalent to the national median performance by eighth grade students on any annual administration of the Sequential Test of Educational Progress.
- "Achieving a score on the California Achievement Test (Level 4) during high school which represents national median performance for eighth grade students."

The district's policy, which became effective in 1976, says students do not have to demonstrate eighth grade competency in either reading or mathematics if the parent or guardian signs and sends to the school a letter acknowledging that the student proposes to graduate without achieving that level of competency.

For more information, contact Jack L. Davidson, Superintendent, Austin Independent School District, 6100 Guadalupe, Austin, Tex. 78752.

St. Paul (Minn.) Open School

Graduation based on competence in "real life" tasks. As a research and development school and as a K-12 alternative within the St. Paul Public School District, the St. Paul Open School does not have to follow traditional graduation requirements. It substitutes demonstration of competencies in six categories:

- **Career education.** Students demonstrate competence in job seeking skills, ability to investigate a career and plan for the future and to write a description of their post-high school plans.
- **Community involvement and current issues.** Students demonstrate the ability to learn from and serve the community, to serve the school and "to grapple with current issues."
- **Consumer awareness.** Students demonstrate competence in comparison shopping, personal finance or consumer protection. They must score 70% on a basic math test or score at least at the 50th percentile on a nationally normed math achievement test.
- **Cultural awareness.** Students demonstrate an understanding of their own and two other cultures.
- **Information finding.** Students identify, use and evaluate a variety of resources to gain information.
- **Personal and interpersonal skills.** Students demonstrate an understanding of interpersonal skills and of how to maintain a healthy body. They demonstrate ability to communicate, and they submit a formal written description of their education over three years.

Each student meets with a graduation committee to explain how he will demonstrate competence in each area and to suggest a person who is competent to validate his skills. The committee must agree with the student's plan and his choice of validators. The committee, chosen when the student is a senior, is composed of five persons: a counselor, the program's coordinator, the student's advisor, a 10th grade student in the school and one other person of the student's choice.

The validators are persons who have worked with the student or who are qualified to make an informed judgment about a competency which a student claims to possess. The validators may be any person, usually adult, that a student chooses, regardless of relationship.

The validation of competencies, presented in written form, gives testimony to when, where, how and how well the student demonstrated competence in specific areas. For example, parents might testify to their son's competence as a consumer, a physical education instructor could verify competence in awareness of maintaining a healthy body and an employer could validate a student's competence in career education skills.

To graduate, a student must submit to his graduation committee 25 to 30 pages of validation statements. In addition, he must submit a description of what he has learned in his last three years of school. The committee decides if the student should be graduated. Four of the five members must approve the recommendation.

Joe Nathan, the director of the school, says he knows of about 90 "adoptions" of the school by other districts, but he does not know how many include the nontraditional graduation requirements. The St. Paul Open School graduates 45 to 50 students per year.

For more information, contact Joe Nathan, Director, St. Paul Open School, 97 E. Central, St. Paul, Minn. 55101.

Malvern (Ark.) High School

Five different types of diplomas and certificates; minimum grade level score on commercial test required for competency diploma. This high school has come up with a different twist for awarding high school diplomas. It did not develop its own competency tests. Instead, it decides which of five kinds of diplomas or certificates students receive partially on attainment of minimum scores on a commercial test. The district uses the Science Research Achievement (SRA) Test and requires students to attain a minimum composite score of ninth grade, first month (9.1) in reading, language and math to receive a **competency diploma**. Students also must complete a minimum of 12 academic credits and one activity credit at the senior high level and all required courses.

The other diplomas and certificates awarded by the school are:

- **Honor diploma.** Students must complete a minimum of 14 academic credits and one activity credit at the senior high level. All required courses must be completed, including a minimum of two accelerated courses, one of which must be math or science. Students must achieve a cumulative grade point average of 3.5 or better. Their composite score on the SRA must be one month or more above grade-month level.
- **Basic diploma.** Students must complete a minimum of 12 academic credits and one activity credit at the senior high level. All required courses must be completed, and students' composite score on the SRA must be at the 7.1 level. (This diploma will be phased out at the end of the 1978-79 school year.)
- **Certificate of vocational proficiency.** Students must complete a minimum of 16 academic credits and one activity credit. All required courses must be completed, including satisfactory completion of a two-year vocational-technical program or work-study program. Student scores on the SRA are below the 7.1 level.
- **Certificate.** Students must complete a minimum of 16 academic credits and one activity credit. All required courses must be completed. The awarding of this document vouches for school attendance and course exposure.

Student scores on the SRA are below the 7.1 level.

"Since the board adopted competency testing as a requirement for a high school diploma in the spring of 1976," says Principal Don R. Henson, "a number of students are applying themselves to a much greater degree." Students receive a skills profile as part of the testing program. It lets them know in which areas they are deficient and where concentrated study is needed. The school makes available a cassette learning program to students needing help. Students may check out tape players and cassettes in reading, language arts and math, plus activity books of exercises to strengthen basic skills.

The results: Of 204 students who took the SRA test as juniors, only 12 failed to qualify for a basic diploma by the end of their senior year.

In another initiative, the school is developing its own basic skills exam for sophomores. They will be required to pass it in order to have free time or campus release privileges during release periods.

For more information, contact Don R. Henson, Principal, Malvern High School, 525 Highland St., Malvern, Ark. 72104.

Promotion/Retention Policies

The following case studies illustrate how the competency movement is reflected in promotion/retention policies. Note, too, that some policies include provisions for high school graduation. The studies were drawn from replies to the **Critical Issues** survey for this report.

In some cases, new district policies on promotion/retention were initiated to comply with state legislative requirements, e.g., Florida's requirement that each district implement a pupil progression plan. On the other hand, some district policies are independent ventures meant to put more emphasis on basic skills and to guarantee that students meet minimal expectations prior to promotion or graduation.

Almost all district policies on promotion/retention submitted for this report emphasize that the decision to promote or retain a student depends on many factors and that allowance must be made to accommodate individual differences. Many districts say generally that promotion is based on a "continuous progress" system which enables students to move on to the next level after they have mastered the previous one.

Pasco County School District, Land O'Lakes, Fla.

Pupil progression plan based on statewide minimum requirements and districtwide standards. In keeping with Florida law, which requires each district to develop a pupil progression plan, the Pasco County School Board adopted its plan in August 1977. Its philosophy is that grade placement of each pupil should serve the best interest of the pupil. Students are promoted on the basis of districtwide standards and state requirements for minimum competence in basic skills.

The classroom teacher has primary responsibility for determining the promotion or nonpromotion of each student, subject to review and approval of the principal. The teacher's decision, in turn, is based on the results of mastery tests, classroom assignments, daily observation, standardized tests and state assessment. Students must meet the district's minimum standards in reading, writing and mathematics, but meeting them does not automatically result in promotion. The minimum standards are those required by state law. Tests to determine if standards are being met are conducted at the beginning of grades 3, 5, 8 and 11.

Primary teachers (grades K-3) are expected to identify students who are not able to make satisfactory progress in the basic skills or those who are immature physically, socially or emotionally. The district says: "To the extent that resources are available, each school should create special primary classes to emphasize basic skills instruction for those students who require more intensive instruction or an extra year in the primary grades."

A student who has been retained once in the primary grades and still has not acquired the minimal reading, writing and mathematics skills may not be promoted to the fourth grade. The district recommends that such students be placed in a special program, e.g., an intermediate basic skills class.

Promotion in the intermediate grades (4-6) is based on pupil progression in the basic skills and "on the pupil's ability to apply the basic skills to the study of other subject areas." Students are expected to make at least one-half year's progress in basic skills during the school year to be promoted from grades 4, 5 and 6. Teachers determine whether students have made that much progress by analyzing the results of all tests and on how students do on daily assignments. "Under no circumstances should pupil performance be judged solely on the basis of a single test," the district's guidelines say. In addition to basic skills achievement, students must earn passing grades in the majority of other required subjects. Students who are to be retained but who could meet promotion requirements in less than a year should be counseled into a summer program with reevaluation of the student's grade level at the end of summer. Schools also are encouraged to establish basic skills classes for students who need an extra year of instruction before they are promoted.

The district says students who are not ready to go into the seventh grade after spending a total of nine years in school (counting kindergarten) should be recommended for special assignment in a basic skills class at the junior high level.

In grades 7-9, students must meet the district's credit and course requirements in order to be promoted. In addition, the district says that the required minimum level of achievement in reading/language arts, math, science and social science is one-half year of progress for each year of instruction. If a student fails any one of the required academic courses, he should be retained. Failure of two or more electives also can cause a student to be retained. The district recommends that students be encouraged to complete requirements for promotion in summer school. It also encourages junior high schools to establish special classes emphasizing basic skills for students who cannot be promoted to senior high school. Statewide minimum competency standards must be met by eighth grade students before they can be promoted.

In the senior high school (grades 10-12), promotion is based on the attainment of credits. As an example, students are required to have three or more credits to attain the rank of junior and nine or more credits to be designated seniors. To be promoted from grade 11 to grade 12, students must meet the district's minimum requirements in reading, writing and mathematics. They are the same as the statewide requirements. In addition, starting with the class of 1979, all Florida students must pass a functional literacy test prior to graduation.

The district encourages the establishment of senior high school basic skills classes for students "who have been administratively placed there and for other senior high students who cannot meet standards for a high school diploma." Such classes, the district recommends, should not be given a grade level designation.

The Pasco County School District provides for "administrative placement," a promotion to the next higher grade level granted by the principal. It is used for a student who has not met minimum standards but who may not benefit from assignment in the same grade. Parents must be notified in writing that their child is being promoted on the basis of an administrative placement. In addition, both the student's report card and cumulative record must indicate that the placement was made, the reason for it and the name of the principal who initiated it.

Here are other guidelines on promotion and retention provided by the district:

- Under most circumstances, a student may be retained only once in the primary grade, once in the intermediate grades and once in the junior high school. Retention a second time at any level must be recommended by the principal and approved by the superintendent.
- Parents must be notified in writing at any time it is apparent that the student may fail or is doing unsatisfactory work.
- Report cards must reflect the student's level of achievement. Parents must be able to assume that students earning satisfactory grades in the regular program are achieving within the range appropriate or acceptable for their grade or the course in which they are enrolled.
- Students who are to be retained must receive counseling services and may be recommended for evaluation by specialists if the principal and teacher feel such a referral would benefit the child.

For more information, contact Mary Giella, Assistant Superintendent for Instruction, Pasco County School District, 2609 U.S. Highway 41 North, Land O'Lakes, Fla. 33539.

Dayton (Ohio) Public Schools

Attainment of "minimum expectations" required for promotion; retention allowed for students to achieve minimum expectations. Elementary students in Dayton are expected to meet the "minimum expectations" in the basic skills of reading and math established by the district as one condition for promotion. But, the district says, the accomplishment of the minimum expectations shall not automatically result in promotion to the next higher grade.

Other considerations are regular attendance, achievement level in all subject areas and acceptable work habits and attitudes. The district considers absence of once per week or more as "erratic," and it defines "excessive absence" as a rate of 20% or more absenteeism. Acceptable work habits and attitudes are categorized as self-discipline, respect for the rights of others and preparation of assignments on schedule.

Minimum expectations in reading and math are the criteria for promotion in the primary grades. In the intermediate and upper grades, the district recommends that students be considered for retention if they earn two failing marks in both reading and math or in any two of the "academic" subjects (reading, math, spelling, English, social studies, science/health) by the end of the third report period.

Like many other districts responding to the **Critical Issues** survey, the Dayton schools consider retention as an "administrative procedure" which allows the additional time needed by some students to achieve minimum competency.

Other general guidelines on promotion/retention used by the district:

- Parents should be made aware of lack of student progress as early in the school year as possible. "An acknowledgement of such notification should be obtained from the parents."
- A student completing 10 years in grades 1-8 who does not meet minimum expectations should be recommended for assignment to grade 9.
- A student who has been held back once may not be retained at any subsequent grade without a psychological evaluation.
- A retained student may be promoted if the teacher and the principal determine that requirements have been met and that the placement is in the student's best interest.

- Grade placement should be reevaluated in the fall for students who go to summer school.
- A student who has not met minimum expectations and who would not benefit from retention or specialized services may be administratively assigned to the next higher grade level by the principal. Parents should be informed of the reason for the decision. The pupil's cumulative record should clearly indicate "grade placement by administrative assignment."

For more information, contact William R. Stolle, Executive Director, Dayton Public Schools, 4280 N. Western Ave., Dayton, Ohio 45427.

Salt Lake City School District

Promotion and graduation based on attainment of competency in basic skills. The Salt Lake City Board of Education began to move toward promotion and graduation based on competency in basic skills in the spring of 1975. Initially, the idea of developing a systematic basic skills program came from elementary school teachers. Then, secondary teachers began to discuss competency-based graduation. The board approved both ideas "with enthusiasm," says Supt. Don Thomas.

The district's policy requires that students who do not achieve grade level basic skills are not advanced to a higher grade level. Starting with the class of 1980, students who do not demonstrate competencies in reading/languarge arts and mathematics will not be graduated. Students are given two opportunities to meet requirements. The only students exempted from the policy are those formally identified as handicapped.

The district provides remediation classes of from five to six students during the year for students who are behind in basic skills. Special remediation classes also are held during the summer for classes of eight to ten students. Students who achieve grade level basic skills by the end of the summer are promoted to the next level. Those who do not are detained unless parents elect to take responsibility for their child's promotion.

As part of its move toward competency based promotion and graduation, the district offered inservice training in teaching basics. "We discovered that teachers in grades K-3 had good background in the teaching of reading, but those in grades 4-6 needed inservice training," says Thomas in an article in *California School Boards*.

At the secondary level, he adds, each teacher was required to develop lists of basic skills to be learned in their classes. "This proved difficult because teachers at the secondary level were not accustomed to think in terms of 'basics.' " Thomas maintains, however, that change in the high school curriculum was necessary. During 1976-77, all ninth graders were given competency examinations in reading/language arts and mathematics. "The results were disastrous," says the superintendent. From 30 to 60% of the classes were not able to pass one or both of the examinations.

The district, which enrolls 26,000 students, offers "in-school alternatives" for students having difficulty in the regular program. They concentrate on basic skills in small classes. Students may return to their regular classes when they improve in basic skills.

For more information, contact Don Thomas, Superintendent, Salt Lake City Schools, 440 East First South, Salt Lake City, Utah 84111.

Clarke County School District, Athens, Ga.

Retention based on excessive absenteeism and minimum reading levels; sixth grade reading level required for graduation. This district, serving approximately 10,000 students, adopted a policy in September 1975 which ties promotion to attendance and minimum reading levels.

Students in elementary grades may not be promoted if they miss 31 days during the year. At the high school level, students are failed if they miss 11 days during one quarter. The only exception is an illness that requires a doctor's attention.

The other factor taken into consideration in making promotions is attainment of minimum reading levels. Students are not promoted, for example, to the middle school level unless they read at the fourth grade level. Promotion to the high school level requires a fifth grade reading level, effective in 1978-79. To receive a high school diploma, effective 1979-80, students must be reading at the sixth grade level.

For more information, contact Charles McDaniel, Superintendent, Clarke County School District, P.O. Box 1708, Athens, Ga. 30601.

Lawton (Mich.) Community Schools

Promotion at K-12 level based on 80% competency. This district's policy on promotion, adopted in February 1977, is simple and to the point. It says: "To be promoted to the next grade, a K-8 student must demonstrate mastery of 80% of the competenecies established for the student's current grade level."

To be granted credit for a high school course, a student in grades 9-12 must demonstrate mastery of 80% of the competencies established for that course.

The competencies required at all grade levels were developed by teachers, and they are primarily in the areas of reading and math. Mastery of the competencies, the policy notes, shall be demonstrated by teacher observation, teacher-developed tests and standardized tests. Special education students are evaluated under individualized criteria. (The district serves fewer than 1,000 students.)

For more information, contact R.J. Bandlow, Supterintendent, Lawton Community Schools, P.O. Box 430, Lawton, Mich. 49065.

Orange County Schools, Orange, Va.

Promotion/retention policy based on reading level, mastery of basic skills. This district adopted a policy in 1976-77 which specifies promotion and retention guidelines. Taken into consideration are student maturity, progress in basic skills, reading level and whether the student has been retained before. The 4,000-student district says, for example, that students who are not reading at grade level in grades 2-5 and who have not been held back previously should be considered for retention. It notes, however, that each promotion and retention must be decided on its own merit.

At the middle school level (grades 6-8), students failing to demonstrate mastery of 80% of basic skills in two or more subject areas are considered for retention.

Generally, the district says "retention should never be an end-of-year surprise to student or parent." It adds that teachers are responsible for making the parent aware early enough for remedial action to be taken "if a pupil's work falls below an acceptable level."

Here are the district's guidelines on retention in grades K-8:

- Parent or guardian should be notified by letter and a parent conference arranged not later than the end of the first semester for a student considered for retention.
- Should difficulty continue, a second conference involving the principal should be scheduled no later than the end of the third nine weeks of school.
- All teachers involved in the instruction of a student should have a voice in the promotion, retention or placement of that student.
- Students in grades K-8 should be retained no more than one time at any grade level. "Students retained twice between grades K-8 probably will receive little benefit from further retention at that level."
- Retention should be a joint decision involving the teacher, principal and parent.
- Records and test scores of a retained student should be completely evaluated and an instructional plan developed which will insure maximum benefit from the repeat year.

At the high school level, retention is based on failure to earn the prescribed number of credits, which include a course in English in both the 11th and 12th grades.

For more information, contact Renfro Manning, Superintendent, Orange County Schools, Orange, Va. 22960.

Muroc Unified School District, North Edwards, Calif.

Attainment of specific reading and math levels required at grades 3 and 8 and for high school graduation. The promotion and graduation policy of this 3,000-student district, adopted in 1973, requires specific reading levels before advancement or promotion.

It says:

Students in grade 3 who fail to score on a 3.0 level at the end of May will be promoted to grade 4 only on attaining the required level. Parents of students likely to fail should be notified during the first six weeks of school.

Students in grade 8 who fail to score at the 6.0 level in reading and/or math by the end of May will participate in the graduation activities, but their diplomas will be granted only upon attaining the required level.

Similarly, students in grade 12 who fail to score at the 8.0 level in reading and/or math at the end of May will participate in the graduation activities, but their diplomas will be granted only upon attaining the required level.

The exception the district makes to its general policies on promotion and graduation is this:

> "When a student has been retained once and still does not meet standards, promotion or graduation may be granted on the recommendation of a committee made up of the school principal; one teacher familiar with the student's schoolwork, personality and physical size; the psychometrist, psychologist or a counselor; and a district administrator."

For more information, contact Richard B. Lynch, Superintendent, Muroc Unified School District, P.O. Box 833, North Edwards, Calif. 93523.

CHAPTER IX

How-To: Tips and Guidelines on Minimum Competencies

This chapter provides tips, guidelines and sample competencies and performance indicators. Additional helpful guidance can be found in the chapters on what's happening in states and in local districts.

Setting a Policy for Minimum Competency Testing

The following advice on setting a policy for minimum competency testing comes from Henry M. Brickell, director of the Policy Studies in Education, Academy for Educational Development, New York City. It was presented by Brickell at four regional workshops on minimum competency sponsored by the Education Commission of the States and the National Institute of Education. It has been edited slightly for reasons of space.

A policy for minimum competency testing must consider seven elements:

1. What competencies will be required?
2. How will they be measured?
3. When will they be measured?
4. How many minimums will be set?
5. How high will the minimums be set?
6. Will the minimums apply to schools or to students?
7. What will be done about the incompetent?

What Competencies?

Begin by distinguishing between *school skills* and *life skills*, between the skills it takes to get by in school and the skills it takes to get by in life, between those needed to succeed later in school and those needed to succeed later in life.

There is a difference. And there are different tests for them. Here is a question from a *school skills* test:

> If John has 70 marbles and gives Jose 13 marbles and gets 26 marbles from Slim and gives 38 marbles to Alice, how many marbles does John have left?

And here is an item from a *life skills* test:

> Balance this checkbook by adding these deposit slips and subtracting those cancelled checks.

Both require arithmetic, but the first one — although it sounds easier — requires the student to abstract the ideas, decide to add and subtract, and arrange the numbers before making the computation. The second exercise does not. The first are classic skills of the school room, excellent predictors of success in higher levels of mathematics. In fact, it is more important — in *school skills* — to set the problem up correctly than to get the right answer.

But in *life skills*, getting the bank balance right is everything.

How about *school skills* for the college bound and *life skills* for the job bound? Or maybe both for everybody? How about *school skills* for promotion to the next grade and *life skills* for graduation from school? Or maybe both at every point in school?

Of course, there are *basic skills* — such as reading, writing and arithmetic — used in both school and life, which is why they are called "basic."

Thus, there are five choices in which competency could be tested:

1. Basic skill.
2. School subject.
3. Life area.
4. Basic skill *applied* in each school subject.
5. Basic skill *applied* in each life area.

The obvious choice is #1 — basic skills. But —

— Unless you choose #2, teachers of art and music and science and social studies and foreign languages and driver education and vocational subjects have no minimum standards.

— Unless you choose #3, teachers can teach about school and not about life.

— Unless you choose #4, students may spell a list of words correctly in English class but misspell them in their science laboratory notebooks.

— Unless you choose #5, students may learn to add and subtract but be unable to balance their checkbooks.

But you can't select them all because schools do not have time and money for that much testing. So choose very thoughtfully. You will have to live with the consequences.

How Will Competencies Be Measured?

Competencies can be measured or tested in four ways:

1. Actual performance situations in later school or on the job. This is ideal testing.

   Advantages: The student demonstrates minimum competency by entering and graduating from the next level of schooling or getting a job and keeping it.

   Disadvantages: The trouble is that such "testing" is expensive; it takes years; and the results come back too late to help either the school or the student.

2. Simulated performance situations set up in the schoolhouse to resemble those in later school or on the job. This is good testing.

Advantages: The student demonstrates minimum competency in artificial situations like the real ones to come. This is cheaper, takes less time and gives quicker results to help school and student correct failures.

Disadvantages: The situations are not real, and the results may not match actual performance later; there are few good tests available; and it takes more time and money than using paper and pencil.

3. **School products and performances.** These are essays, paintings, experiments, clarinet solos, brake jobs, speeches, touchdowns — things students make or do while studying in school.

   Advantages: Takes less time and money than arranging special simulations.

   Disadvantages: This is not as good as simulated performance testing because the student usually has had help, the test pressures are missing, and it is hard to score the results.

4. **Paper and pencil tests** in the classroom — what is usually thought of as "tests."

   Advantages: These tests are quick, easy, cheap and available.

   Disadvantages: Most such tests measure a narrow band of knowledge or skill and are far removed from actual performance situations. Thus, the results may not foreshadow later success in school and life, where success depends on attitudes, values, personal warmth, leadership, creativity, physical strength and other things a person cannot show with a piece of paper and a pencil.

As you move away from actual performance situations in life and move toward paper and pencils, testing becomes easier and cheaper but the test results become less likely to predict later success. Thus, a student can fail on a minimum competency paper and pencil test but pass in the actual performance situation of real life.

Now, you might want to do this: use simulated performance situations to test *life skills* and use paper and pencil to test *school skills*.

Another decision is this: Will you develop your own tests or use what is available? As you move toward paper and pencil and as you decide to test school skills, you will find more and more tests to choose from. And vice versa. For instance, you will find many paper and pencil tests for solving science problems — an important school skill — but you will find few simulated performance tests of ethical behavior, an important life skill.

When Will Competencies Be Measured?

Competencies can be measured *during school* if you believe:

- Students and their parents deserve a distinct early warning if there is trouble ahead.
- You want to measure competency to move up from grade to grade in school.
- Administrators need to make changes any time students do not progress, i.e., changes in curriculum course selection, faculty inservice training. The results of teacher-made tests alert teachers to learning problems, but they will not alert administrators.

Competencies can be measured *at the end of school* if you believe:

- Students learn at different rates. All students deserve enough time to reach the minimum.
- You want to measure competency to move out of school and into the next school or into life.
- Teacher-made tests and daily classroom contact will identify student who are not making progress during school. Formal competency testing is not needed.

You could measure *school skills* during school to decide grade-to-grade promotion and *life skills* at the end of school to determine graduation.

Or, both could be measured at the end if you feel that even the college bound should be competent for life and even the job bound should be competent for further school.

How Many Minimums Will Be Set?

Will you set one minimum for all students or will you consider ability, special talents, family background or other factors we know affect the learning of students? Will you set one minimum for all schools or will you consider community characteristics, faculty composition, school spending or other factors we know affect the quality of schools?

Think about student ability as one example. A single standard can be too hard for a dull student yet be too easy for a bright student and not motivating for either. It could be objectionable to parents and teachers of the dull, laughable to parents and teachers of the bright and acceptable to none of them.

Using a graduated standard on a sliding scale according to ability will solve all those problems — and instantly create others. A graduated standard expects less of some students. "Expect less, get less" is a formula most parents and teachers don't like. A graduated standard will grant a diploma to a dull but energetic student who gets 40 points on the exam and refuse a diploma to a bright but lazy student who gets 60 points on the exam. Moreover, current ability tests may not give fair and accurate measures and thus cannot guide expected achievement.

A compromise — with the best of both worlds — also has the worst of both worlds. You can use a low minimum for every student regardless of ability and a graduated minimum for students of, say, above-average ability. But the old problems — such as how to measure ability — are still there.

The identical principles apply to setting standards for schools. A single standard may demand nothing of a weal-

thy school and the impossible of a poor ghetto school. A graduated standard may label poor schools as places without hope or give them an excuse for not improving.

How about setting a separate standard for each student — a standard negotiated among student, teacher and parent. And perhaps the same for each school — a separate standard negotiated among board, administration and faculty. Admittedly, the logistics would be formidable.

You may want to arrange several minimums into a graduated sequence to check student progress from grade to grade. Again, you may want to set a rough, general minimum immediately and refine it into specifics over the years ahead.

How High Will the Minimums Be Set?

First, consider: if you take a cross-section of a school at any grade, you will find that some students are actually performing far above that grade and others far below. Some fifth graders do eighth-grade work while others do second-grade work. Some twelfth graders do college work while others do sixth-grade work. The school is a staircase with one step labeled "seventh" but only half the 12-year-olds are standing on it.

. . . Traditionally, minimums are something schools try for, not guarantee. They are goals, not standards. "Zero reject" is not a schoolhouse expression; "each student to his/her own potential" is. And just as potential has no upper limit, it has no lower limit.

How many students can your school or state afford, both economically and politically, to remediate — or not promote or not graduate if remediation fails? About 10%? Certainly it isn't 20% — the percent failing competency tests in many places today. Say it is 5%. Whatever it is, the percent failing the test will probably be higher. If you can't raise students to meet the minimum, will you lower the minimum to meet the students? Those are the only two ways to guarantee that 95% will succeed.

You need to think about that. Better choose a passing score, make a pilot run with your tests, see how many students fail and decide whether to raise the students or lower the tests. A too-difficult test will embarrass you with too many failures and you will have to cut loopholes in it to let students escape — grandfather clauses, setting very low passing scores to start with and raising them year by year, and other loopholes. A too-easy test will embarrass you by being a joke to above average students, their parents and the taxpayers.

There is something else about the minimum. How can you call it a "minimum" if the successful adults in town cannot pass it? Should you define "successful" adulthood as being off welfare and out of prison, give the test to a cross-section of adults and then make the passing score equal the lowest score made by any successful adult in town? In short, what do you mean by "minimally competent"? Can you find an adult example of it walking the streets and pick his/her test score as your standard? How could you justify making it any higher?

Will the Minimums Apply to Schools or to Students?

Will you judge students or will you judge schools? Must each person measure up or must each program measure up? Can the school program succeed even though some students fail?

The difference is important. It determines whether you will write test items all students can pass or only most students can pass; whether you will test everybody or only a sample; whether you will report results to each individual parent or only to the general public; whether you will settle for a school program that reaches, say, 70% of the students even if that 70% misses, for example, every single disadvantaged child; and whether you will modify every unsatisfactory program or fail and recycle every unsatisfactory graduate?

You can see the difference in costs, types of tests, demands on the professional staff to teach every student, pressures on each student to succeed and political action by parents of each student who fails.

What Will Be Done About the Incompetent?

What will you do about incompetent *students*?

1. Verify the findings independently before acting?
2. Give them several more chances?
3. Lower the standard so they can pass?
4. Remediate so they can pass?
5. Refuse to promote or graduate them until they can pass?
6. Promote or graduate them with a restricted diploma or certificate of attendance?

What will you do about incompetent *schools*?

1. Verify the findings independently?
2. Give them several more chances?
3. Lower the standard so they can operate?
4. Redesign their programs to match successful programs?
5. Refuse to let them operate unless they meet the standard?
6. Let them operate but refuse to accredit them?

You notice the parallels, of course. Whether you are requiring each student to be competent or each school to make a majority of its students competent, the choices are similar.

If you choose to deal with *students*, each incompetent one must be held back, or remediated, or labeled and sent on. If you choose *schools*, current students can be moved on through uninterrupted but, to help future students, the school must be closed or improved or left open but have a skull and crossbones painted on the door.

There is a lot to think about in a minimum competency program. Think carefully.

Minimum Competency Tests: Questions, Problems, Guidance

Minimum competency tests are designed to measure mastery, not the achievement of one student compared to another. More often than not, the question of where a student falls in a normal distribution does not apply to competency testing. Instead, students are given a non-competitive chance to demonstrate whether or not they have reached a set level of competency or "proficiency." Competency tests simply tell if a student has and can apply certain skills and knowledge.

There are three common characteristics of competency based tests:

1. They are based on clearly defined performance objectives representing desired competencies.
2. Test items are specifically designed to measure the objectives.
3. Scores are interpreted in terms of attainment of a pre-set criterion or standard of performance.

Determining Objectives

Districts faced with formulating objectives will, first of all, have to decide which objectives to select. They also must decide whether to state the objectives in specific or general terms, how to sequence the objectives (from simple to complex and from abstract to concrete), and how the field test data are to be interpreted in terms of importance and comprehensiveness of objectives. For example, test items applying to a particular objective may be too easy or too hard, as shown in a field test.

H.A. Wilson, director of the Dept. of Exercise Development for the National Assessment of Educational Progress (NAEP), recommends the use of a wide variety and large number of consultants in constructing objectives. Other testing experts generally agree that consensus is important. "The objectives to be measured by minimum competency tests," Wilson maintains, "must not be left solely to the judgment of professional educators. The general public either at the national, state or local level must be heavily involved." By the same token, he says, the judgment and experience of educators also must make a heavy contribution to the development of objectives.

Objectives are developed mainly for one purpose: to make explicit and unambiguous the questions to be answered by performance on test items. Wilson adds that the essential task of objectives development is "to produce a complete and detailed specification of a subject matter domain." Consultants can best accomplish this task, he says, by working out a detailed matrix of contents and behaviors. In the case of minimum competency objectives, he says, a third dimension must be added to specify the complexity of the tasks implied by the first two dimensions. "Objectives development in this sense is an expensive and time consuming task." But, he adds, "given the potential impact that minimum competency tests may have on the lives of young people, we cannot afford to do less."

What are the problems to be faced in constructing reliable and valid competency based testing instruments? Here are

Dangers of Testing

Joseph A. Califano, secretary of the U.S. Dept. of Health, Education and Welfare, urges educators to make their publics aware of the critical limitations and dangers of testing. He outlines them as follows:

- *Tests are tools, not magic wands.* "Even with the most sophisticated tests, the assessment of learning will still require sensitive judgments about a child's human development. Tests can help inform such judgments; tests cannot make them."
- *Cultural bias.* "Clearly, students whose native tongue is not English will find standardized tests more difficult," as will children from poor or broken families. But, he notes, these are reasons for improving tests, not for discarding them.
- *Tests are limited.* Tests measure progress toward but a few of the myriad goals schools are asked to pursue. Standardized tests can help measure whether students are learning certain skills, but they cannot tell how well schools are performing other large parts of their jobs. "This limitation is a clear warning which all of us must sound to the public against preoccupation with testing."

Even with their limitations, tests can be validly used to diagnose individual learning problems, to help make schools more responsive to parents and taxpayers who are vitally concerned with educational quality and to certify that students possess certain basic abilities, Califano says.

Legislators, Take Note

To the layman, it may seem reasonable to expect that after 12 years of schooling a graduating senior should read at least at the level of the average sixth grader. In fact, it is not uncommon for legislators — who are laymen, for the most part — to specify that students should be able to read at the sixth-grade level or to do math at the eighth-grade level.

But, legislation specifying such a level is imbued with a certain naive logic, says H. A. Wilson of the National Assessment of Educational Progress (NAEP). He explains: Grade level equivalent is simply another term for percentile levels on a norming distribution. "In fact, a sixth-grade reading level in this context means only that a high school senior is in the bottom 5th to 10th percentile of the distribution of scores of high school seniors in reading achievement." So, he concludes, a minimum competency objective stated in terms of grade level equivalent will have the effect of guaranteeing that some known percentage of high school seniors will not receive a standard diploma.

"If the educational system is viewed as a social screening device, such a criterion is probably quite useful," Wilson says. But such a view is no longer acceptable to most educators, he notes. The other problem is that legislators' intentions are to guarantee that students can read, write and compute at a minimum level, not to prevent a certain number of students from receiving a diploma.

some of the serious problems, as outlined by Arlene Fink, Center for the Study of Evaluation, Graduate School of Education, University of California, Los Angeles:

- "The expertise for constructing reliable and valid competency based testing instruments is not currently available in a form that an instructional developer can readily translate into practive."
- Few dependable rules exist to help select and state competencies.
- Many developers lack training in test writing.
- Figuring out the meaning of scores resulting from competency based instruments is a difficult and costly task that requires psychometric skill and a generous budget.

Constructing Tests

Most testing experts agree on two aspects of developing a competency based test: (1) Systematic field trials of the test must be conducted with a representative sample of the population it is to serve, and (2) the results of the test must be looked at to ascertain that it is effective in testing what it is supposed to test. Most testing experts do not agree on many other aspects of competency based testing.

Many school districts will have maximum discretion, within the limits of state law and state guidelines and regulations, in constructing minimum competency tests.

Many of the problems districts will confront are outlined by Henry M. Brickell, in the section in this chapter on setting policy. Here are additional questions raised by school personnel:

- How many competencies? Initially, most districts in Oregon specified 200 or more competencies for high school graduation. Now, most of the districts that "are on the cutting edge" have moved down to roughly 33 competencies, said an Oregon administrator.
- How many test items are needed to adequately measure an objective? Should the test developer sample items? If so, how can a developer select items according to their difficulty? These are difficult questions to answer. UCLA's Arlene Fink advises calling in testing experts or obtaining "item forms" to guide test development.
- How about testing the affective or attitudinal domain? NAEP's H. A. Wilson advises that minimum competencies cannot be applied to attitudinal problems because this goes against the basic philosophical tenets of a free society. To require that a person has the proper attitude before being awarded a high school diploma "implies both indoctrination and invasion of privacy."
- How much time does it take to develop a test? NAEP spends about two years in developing one of its tests, yet state legislation often requires districts to have tests in operation in much less time.
- Questions asked by teachers in reviewing minimum competency objectives and test items include: What can we teach? What can't we teach? Are we willing for schools to be held accountable for this? Are we willing to hold back a student for this reason?
- How about alternatives to paper and pencil tests? With regard to this question, school administrators ask: What's feasible? What can we afford?
- How about offering tests in a student's native language, if it is other than English? Some states mandate that students take minimum competency tests in English, leaving the district no choice in the matter.
- Should handicapped children be included in testing? State law sometimes provides an answer. Otherwise, complex problems arise in trying to determine the applicability of competency tests for handicapped children, e.g., those with dyslexia.
- Are test items available from a national test bank or pool? This idea is being discussed at various levels, but complete banks do not exist. In some areas, school districts are forming consortia and pooling their resources to develop items. States such as California are also making pools of items available for use by local districts.

Guidance on Specific Problems

NAEP's Wilson offers advice on many specific problems districts must confront in dealing with minimum competency testing:

When should the tests be administered? Minimum competency tests should be administered early — in grade 9, for example. By doing so, districts have time to provide "serious remediation" and additional opportunities for passing the tests.

A period of two or three months should elapse between the end of a remedial or compensatory program and a second testing opportunity. Otherwise, the loss of achievement that students experience — e.g., during the summer — is not allowed to occur and student who do not truly possess the necessary skill levels may "pass" the competency test and be denied further remedial help.

How should the passing score on a minimum competency test be determined? Three methods are available for setting the passing score:

1. The score can be set by fiat. One or more persons in positions of power or responsibility simply state that a passing score shall be 75, 80 or 90%. This is the most commonly used, as well as the worst method, Wilson says. Setting a score in such a way has no relationship to validity.
2. The passing score can be arrived at through consensus. "To the degree that the judgment group is a large enough sample of individuals with relevant experience, the consensus method at least reflects currently held beliefs."
3. The empirical approach can be used. It involves the identification of a relevant criterion group — e.g., graduating seniors from "good" high schools, junior college freshmen, entry-level employees. This is the best method, but it is both expensive and difficult. There is little widespread acceptance of a relevant criterion group.

How serious is the danger of teaching to the test? Can it be prevented? Wilson says "teaching to the test" is the most ancient and blatant abuse of testing. And, he adds, the danger of teaching to the test increases in proportion to the relevance of the test outcome to the pupil or the school. "Where the results of minimum competency testing are highly relevant to both the pupil and the school, the danger is high. It is a common temptation, almost a challenge, to beat the system," Wilson notes.

Testing experts point out that "teaching to the test" and "teaching the test" are two different things. In other words, teaching to the test or the competency prepares a student for the kinds of questions that will be asked, but it does not focus on the specific test questions.

Curriculum experts point out further that a much more important consideration than teaching to the test is test content. They argue that the specific items chosen for a test can have a limiting effect on the curriculum. Their recommendation, therefore, is that both test items and competency statements (objectives) should exhibit great variety so that the curriculum is varied.

What can be done to guard against teaching the test? Both test security measures and administrative procedures are suggested. One example: Wilson says that current computer technology allows for construction of almost unlimited forms of a test by sampling items from a large and well constructed pool of items.

Teachers in Minneapolis, for example, have developed a program called COMPUTE for generating 500 different types of computation items for testing in mathematics. In addition, teachers and students in Minneapolis and St. Paul are developing programs for generating items in other areas, such as problem solving and geometry.

Standardized Tests Questioned

The National Association of Secondary School Principals (NASSP) states in its booklet, *Competency Tests and Graduation Requirements*, that "it is possible to use standardized achievement tests as performance or proficiency measures." A school district can set cutoff scores or criterion levels in defining the competencies it considers important, NASSP explains.

It adds, however, that "most measurement personnel would probably recommend a specially tailored, criterion referenced test to determine graduation requirements for a school district."

NASSP's assumption is correct. Measurement and instructional experts seem to agree on the use of criterion referenced or, as they are sometimes called, objective referenced tests in determining minimum competencies. Here's why, as explained by various experts:

James Popham, professor of education, University of California, Los Angeles: "Standardized achievement tests were originally created for a totally different population, and they are inappropriate for program evaluation. . . . The main problem with relying on standardized achievement tests as the vehicles for establishing performance standards is that such tests provide miserable instructional targets. . . . Competencies are rarely isolated or described by the test publishers. . . . A district which wants a maximum number of its students to master the key competencies it designates must clearly identify for its instructional staff exactly what those competencies are. The use of standardized achievement tests almost certainly mean that a substantial number of a district's students will fail."

Popham explains further that a norm referenced achievement test permits a district to tell whether a student scores at, say, the 45th or 78th percentile on national norms. Thus, he says, some educators may think that all they need to do is to get norm referenced tests for each basic skill area and then set scores equaling, say, the 25th percentile nationally, as the district's standard of proficiency or competency. Popham advises: "While this approach seems alluringly simple, it is laden with risks."

Another consideration: Legislation in some states requires districts to provide remedial instruction for students who fail to meet the established minimum standards. Popham advises that such a stipulation will prove particularly troublesome for districts which rely on standardized

achievement tests since such tests provide scant guidance for a district's instructional staff.

Donald Ross Green, director of research for CTB/McGraw-Hill, Monterey, Calif.: The content of standardized achievement batteries, he says, "is too closely tied to the grade-by-grade curriculum. . . . Their range of item difficulties is too wide. . . . Their coverage of the simpler skills is too thin in their upper levels."

Ross Taylor, mathematics consultant for the Minneapolis Public Schools: "The items in a standardized test are not necessarily generated to measure a specific objective or instructional aim. . . . The tests measure only a sample of the content that makes up a program. . . . Certain outcomes are not measured at all."

What Kinds of Tests?

Here are suggestions from Popham, Green and Taylor on the kinds of tests and kinds of competencies districts should consider for minimum competency testing. (Districts will, of course, have to take into consideration state law and guidelines from state education agencies, as well as local considerations.)

View 1: James H. Popham. Popham's advice applies particularly to California legislation requiring districts to set proficiency (competency) standards. Many of his recommendations, however, are applicable to any district confronted with competency testing. He says: "It seems perilous for a district to attempt initially to deal with every conceivable learner competency worth measuring." It makes far more sense, he advises, for a district to adopt a "minimum essentials strategy," limiting the district's focus to a modest number of highly significant skills in each of the three designated areas (reading, writing and arithmetic). Later, as time and assessment experience permit, additional competencies can be added to the district's graduation requirements.

Popham recommends that districts adopt or develop criterion referenced tests. He offers these suggestions:

- Isolate a modest number of high import competencies in the basic skills area. That will prove to be a "grueling intellectual exercise" for those involved since the tendency will be to include too many lower-level competencies rather than finding a smaller number of powerful competencies that include the lesser "enroute" skills. In other words, he suggest that districts aim at identifying terminal skills, which could mean that additional diagnostic tests would have to be developed for examinees who display no mastery of terminal skills.
- Clarify what each of the competencies involves.
- Generate or select pools of test items for each competency so that tests can be given to a sample of the district's 12th grade class, in advance of setting a minimum level of proficiency. "Having information about how the district's students currently perform will be invaluable in deciding the level at which minimum standards should be set," he says.
- Use the item pools to create several forms of testing instruments.
- Specify what level of performance on each competency will be required for graduation. Some districts may choose, in addition, to establish a minimum proportion of the competencies that must be mastered.

View 2: Ross Taylor. The kinds of tests needed are those "with items that most students will ultimately be able to answer correctly," says Taylor.

He does not advocate use of the "basic skills tests" now under development by some of the national testing services to determine if students have achieved the minimum competencies required for high school graduation. "Use of nationally developed tests in this way would seem to imply acceptance of a national curriculum," he says.

An appropriate measurement instrument is a criterion-referenced testing system involving test items keyed to locally selected objectives. Such a system, Taylor recommends, should contain multiple forms of diagnostic tests, progress tests and achievement tests.

One disadvantage of locally developed tests, the Minneapolis mathematics expert says, is that "their quality is not always high." Another disadvantage is that they do not allow for comparison between the performance of local students and those at the regional or national level. This need can be met, he suggests, by selecting items from the National Assessment of Educational Progress for inclusion in local tests.

To assess skills and attitudes which are not adequately measured by tests, Taylor advocates the use of techniques such as observation, questionnaires or the performance of certain tasks. As one example, he says that a competency of "being able to shop comparatively" could be measured by having students obtain information from several stores about the costs of certain items.

View 3: Donald Ross Green. He recommends a "new kind of norm referenced test" for use in testing minimum competencies. Such a test, he says, should meet three purposes simultaneously:

1. Determine which students are qualified to graduate.
2. Provide diagnostic information about what things students need to learn to be qualified to graduate.
3. Assess how well the school or system is doing its job in preparing students to graduate.

Green believes competency tests should measure academic skills rather than survival skills. He does not favor the testing of survival skills because of the difficulty in finding many items which can be used to diagnose survival skills. If, for example, a student cannot properly fill out an income tax return as required in a competency test, does this mean the student does not understand the words used, cannot read, cannot do the arithmetic or has difficulty in writing? he asks. Another problem is this: If the income tax form is changed many students will be back at ground zero in filling it out. So why test such a skill?

Probably a test is needed for each of the three R's, says Green. "Each test needs a meaningful total score which can be used both to determine the status of each student relative to the standard and to assess the school program." He recommends that norms be established as well as a "cutting

point" or "range." "The tests should also have many relatively easy items, far more than is common, falling into a specified number of subskill categories for diagnostic purposes." He notes that the College Test Bureau's experience with the new versions of the California Achievement Tests (Forms C and D) indicates that this sort of norm referenced test compromise is possible.

Green calls for new tests that would be fairly long in each area and easy, compared to current standardized tests. He says special efforts should be made to eliminate extraneous skills and knowledge. Thus, he says, "much more carefully controlled (and easier) standards of vocabulary and readability level should be established." He advises that similar care should be taken in calling upon irrelevant general information to reduce ethnic bias. He also urges that separate ethnic data be obtained during construction and used to further reduce bias. "Minority groups are more likely to be affected by these tests," he says, "and even a small amount of bias can be serious."

The tests should be suitable for administration to seventh-grade students. He explains: "As the growth curves for most general achievement batteries show, basic skills growth usually starts to slow at that level. Hence, that is where the initial sorting, individual diagnosis and evaluation of minimum competency programs should begin."

Will the 'Feds' Step In?

The prospects for a nationally mandated test of basic skills or minimum competencies seem dim, due to the objections of educators, test makers and administrators, and top federal officials. But opponents are not resting easy because of public dissatisfaction with the current level of academic achievement by high school graduates and the knowledge that Congress has in the past mandated requirements for all states to follow after some states started the bandwagon rolling. An example is the Education for All Handicapped Children Act.

A bill proposed by Rep. Ron Mottl, D-Ohio, in May 1977 would have required state education agencies to administer basic skills tests in reading, writing and mathematics to all 11th graders, with passage a prerequisite for graduation. A national commission was to establish standards for educational competency, and state education agencies refusing to administer basic skills tests were to have all federal funds cut off.

Mottl rewrote his bill to make testing voluntary after he heard objections to the mandatory requirements. Another revision was that no funds would be cut off to states or local districts choosing not to participate in the testing. In the new version of the bill, a national commission would develop and suggest appropriate standards to states, with testing in grades 6, 8, 10 and 12.

Also on the House side, Rep. Albert Quie, R-Minn., pushed for using educational handicap rather than a poverty formula as the basis for distributing funds under Title I of the Elementary and Secondary Education Act (ESEA). Quie proposed that educational handicap be measured by testing.

In the Senate, Claiborne Pell, D-R.I., held hearings on nationwide testing and indicated that he is interested in the development of a voluntary, standardized, national basic skills competency test.

One witness who favored mandatory national standards before Congressional committees was Admiral H.G. Rickover, U.S. Navy. Opposing them were federal officials, including Mary F. Berry, assistant secretary of HEW for education, and Patricia Graham, director of the National Institute of Education.

William W. Turnbull, president of Educational Testing Service (ETS), told a Senate subcommittee that he saw no need for a federal program for testing minimum competencies. Such a program, he added, "would raise unnecessarily sensitive questions about the 'intrusion' of federal influence in state and local prerogatives." He said, moreover, that the problem of "cultural bias" would not be ameliorated by a federal effort. (Congress had expressed particular concern about "cultural bias" in tests.)

In testimony before the Senate subcommittee, Roy H. Forbes, director of the National Assessment of Educational Progress (NAEP), said federal action was inappropriate and not needed. He reminded the Senators that the same fears expressed during the development of NAEP regarding potential federal control of the content of assessment were still present.

Both Turnbull and Forbes were asked to supply the subcommittee with a suggested voluntary federal test. Forbes provided "released NAEP exercises" testing both basic skills and applied or survival skills; Turnbull submitted items from ETS' newly developed Basic Skills Assessment.

The Administration's view on the competency movement comes from Joseph A. Califano, secretary of HEW. He said unequivocably that the federal government should not advocate national tests or national standards of scholastic achievement.

"Proposals for federal testing programs, however well intentioned, are misguided; even a wholly voluntary national test or set of standards would be a step in precisely the wrong direction," Califano noted.

The HEW secretary described the federal role in the competency movement as one of supporting the study of testing, helping state and local decision makers answer technical and policy questions about basic competency testing, coordinating the 13 different federal programs dealing with basic skills, evaluating the educational potential of television and strengthening the role of parents in educating their children.

Califano advised, however, that each state should have a program for developing and measuring basic skills that includes competency testing. He added: "Each of the 50 states and each school district should decide how it can make most effective use of competency testing. The federal government should support, but not direct, their efforts."

Tips on Writing Competency Statements

How does a district write competency statements or, better yet, how should it? Here's advice on how to go about it from Keith A. Acheson, a professor at the U. of Oregon. The advice is based on consultant work he did in helping districts in Oregon and California write behavioral objectives and competency statements. (The advice appeared in *Thrust*, the magazine of the Association of California School Administrators.)

- First, he advises, the "troops on the firing line," i.e., classroom teachers, must be involved. "The genuine involvement of a representative group at the start and ultimately of all teachers and administrators seems the most feasible approach," Acheson says.
- Use experienced leaders to keep competency-writing groups on course and not allow digression into philosophical debates or reasons why the task cannot be done.
- Be sure resources are available to facilitate committee work, e.g., official district policies stating curriculum goals and graduation requirements, pertinent sections of the state code, and some well written examples of competency statements.
- Encourage groups to organize competencies into appropriate headings, such as reading, listening, writing and speaking under the general heading of English or "Communications." Some groups, Acheson says, will want to compare their competency statements with prepared lists to identify and fill in gaps.
- Duplicate the products of each session, that is, the competency statements that subcommittees have agreed on and committed to paper. Share them with other groups at the beginning of the next session. That will provide some feedback and variety to the activities of the subcommittees and keep them from getting bogged down and losing interest. Sharing also decreases redundancy among groups.
- Using a proposed competency, have each individual member of the group write a working statement for it. Next, pool the statements and seek consensus on a single, clearly worded statement. Acheson warns that the group may find that more than one competency is contained in a statement. Once the wording is agreed on, however, group members should decide whether to adopt it, adapt it, or reject it as inappropriate for the district. "It may seem inefficient," he says, "to spend time agreeing on the wording of a statement and then deciding to rework it or reject it, but these decisions cannot be made until we agree on a concise description of the competency we are talking about."
- Once decisions on adoption are made, competencies can be assigned to curriculum areas, Acheson says. This may cause a new look at the organization of curriculum and departmental structure, he says. "New categories may be considered (humanities or career development are examples) as well as the deletion of old ones." Other consequences could be that agencies outside the school may be brought into more frequent use, departments may have to be dissolved and faculty members displaced — not easy tasks, he concludes.

As a final note, Acheson adds that anyone planning to participate in a committee writing competency requirements should be prepared for complaints, such as "They should have learned this in the lower grades," and "We tried this in the 30's and it didn't work."

Criteria for Reviewing Minimum Competencies

The Hawaii Dept. of Education used the following criteria, developed by the Northwest Regional Educational Laboratory, to review and refine its proposed minimum competencies for high school graduation:

Teachability

1. Is it possible for the schools to teach the knowledge, skills and attitudes described in the minimum competencies?
2. Is curriculum available related to the individual minimum competencies?
3. Are the minimum competencies designed to allow all teachers to teach them?
4. Will programs be made available to support remediation now or in the near future?

Acceptability

1. Do the minimum competencies represent reasonable standards of proficiency to be required of all students who have completed other requirements for graduation, e.g., attendance and credits?
2. Are the minimum competencies free of statements that suggest that some social, occupational or life roles should be valued more than other acceptable roles?
3. Are the minimum competencies universally applicable across lines of sex, socioeconomic status, race, rural and urban settings, and religious persuasions?
4. Are the minimum competencies reasonable, appropriate and important outcomes of the total educational experience?

Importance

1. Are the minimum competencies generally agreed to be

necessary outcomes for successful adult life?
2. Do the minimum competencies represent levels of student proficiency and accomplishment of sufficient importance to satisfy their use as a basis for the award of the high school certificate [or diploma]?

Generalizability

1. Are the minimum competencies achievable regardless of students' sex, socioeconomic status, race, rural and urban settings and religious belief?
2. Will all students for whom a particular minimum competency is applicable be exposed to sufficient instruction to achieve the specified knowledge, skill or attitude?
3. Do the minimum competencies avoid implying endorsement of curriculum approaches which are not common to all schools?
4. Are the minimum competencies appropriate for those students who transfer within the state?

Feasibility

1. Are the outcomes specified by the minimum competencies quantifiable through some acceptable operational measures?
2. Can the minimum competencies be measured within the schools' time constraints and resources?
3. Will adequate educational resources, e.g., time, staff, money, books and materials, be made available to support the implementation of the minimum competencies now or in the near future?
4. Are the minimum competencies free of specifications which would require special equipment or facilities which are not available to most students?

Specificity

1. Are the minimum competencies worded specifically enough so that it is clear what skills are and are not included in the minimum competencies?
2. Are the minimum competencies prescriptive so as to specify student inadequacies?

Clarity

1. Are the minimum competencies free from educational jargon or other unusual word uses?
2. Are the minimum competencies stated clearly and succinctly?
3. Are the minimum competencies written so they communicate effectively to students, parents, community members, teachers, administrators and other interested individuals?

Tips on Editing Test Items

In preparing or selecting test items to be used for assessment of minimum competencies or proficiencies, school districts should judge the adequacy and appropriateness of the items they plan to use, and they should examine the mechanical features of the test. That advice is offered by the California State Dept. of Education in a guide for school districts to use in selecting, reviewing and editing test items. Here is what it advises:

Selecting and Reviewing Items

A number of criteria can be used to judge the adequacy of test items. However, rather than describing all these criteria, a few basic rules are presented here for school districts to consider in screening out or correcting inadequate items:

1. Multiple-choice and true-false items should have a single best answer. When two or more answers are equally plausible, the item should be revised or eliminated from the item data bank. An example of an item without a single best answer follows:

   Choose the correct punctuation mark that belongs at the end of the sentence:

   We are going to the park

   A. Period
   B. Question mark
   C. Exclamation mark

   Although a period may be the end punctuation mark that a person would be expected to use most often with this sentence, the stem (sentence) could be correctly interpreted as an interrogatory or exclamatory sentence. Without a more specific context, any of the punctuation marks could be correct. To improve the item in the example, it could be reworded as follows:

   Are we going to the park

   A. Period
   B. Question mark
   C. Exclamation mark

2. Multiple-choice and true-false items should require the student to make meaningful discriminations. All the distractors (incorrect responses) should be plausible or appealing to those students who do not possess the knowledge demanded by the item. Items with trivial or unrealistic distractors should be revised or omitted from the item data bank. An example of an item illustrating the problem follows:

   Prior to A.D. 1066 the common language in England was Old English. Which of the following peoples had contributed to this language?

   A. Celts
   B. Chinese
   C. Mexicans
   D. Indians

This item could be improved in the following way:

Prior to A.D. 1066 the common language in England was Old English, to which all of the following peoples had contributed except:

A. Celts
B. Danes
C. Anglo-Saxons
D. Normans

Note that all the alternative answers now are equally plausible to students who have a general knowledge but are not familiar with the dates various national groups migrated to England.

3. The length of the distractors in a multiple-choice test item should be comparable and gramatically parallel to the correct response. Items with response alternatives that are not comparable should be revised or omitted Two examples of this type of error follow:

Prior to A.D. 1066 the common language in England was Old English, to which all of the following peoples had contributed except:

A. Celts
B. Danes
C. Anglo-Saxons
D. The Normans who migrated from France

In this case, the length of the distractor is a cue as to the correct answer. The second example illustrates less subtle cues, which can unintentionally work their way into distractors:

Which of the following is a chemical change?

A. Ice changing into water
B. Water changing into ice
C. Paper burning and changing into ash
D. Water changing into steam

The above item has two significant weaknesses:

a. The incorrect distractors deal with processes associated with water while the correct answer addresses itself to an entirely different substance and process.

b. The correct answer is slightly longer but also involves two process words (i.e., burning and changing) while the distractors have a single process word and are shorter.

As this item stands, testwise students will probably be able to identify the correct response whether or not they know the subject matter. The above item could be improved by modifying the item in the following way:

Which of the following involves a chemical change?

A. Melting
B. Freezing
C. Burning
D. Evaporating

4. The use of specific determiners should be avoided (i.e., words often found in false statements are "only, never, all, every, always, none, and no"; and in true statements the words are "usually, generally, sometimes, customarily, often, could, and frequently." Test items containing specific determiners should be revised if the determiners direct the student to the correct response. An item illustrating this type of error follows:

When the temperature of a gas is increased,

A. the pressure always increases.
B. the volume always decreases.
C. the pressure depends on the volume.
D. the kinetic energy always changes.
E. the volume never changes.

Students familiar with the always-never type of distractor could easily identify item C as the desired response, even though they might not know the gas laws.

5. A completion-type test item should use a relatively small number of well-chosen blanks placed near the end of the statement. An item that has so many blanks that it is unintelligible should be revised or omitted. The following item is illustrative of that type of error:

_____ is a tissue about _____ millimetre thick.

If this item were intended to measure knowledge about human skin tissue, there are not enough significant cues to indicate clearly to the student the content area for a correct response. This short answer completion-type item could be improved in the following way:

Human skin is a tissue about _____ millimetre(s) thick.

Note the inclusion of (s) after millimetre so as not to cue the response to one millimetre or less.

6. Items should be related to meaningful learning goals. An item assessing trivial content or peripheral content should be revised or omitted from the item data bank. Consider the following example:

Which of the following presidents of the United States had wooden false teeth?

A. Washington
B. Harding
C. Hoover
D. Truman
E. Nixon

7. Items should contain content which represents a comparable task for all students, i.e., items should not contain content oriented toward a particular segment of a student population, sex, or ethnic group.

8. An item and its distractors should be so worded that their whole content functions in determining the answer, rather than depending on a key word, phrase, or part of the item to elicit a particular response from the

student. The following item is illustrative of this problem:

A general in the Civil War who became President of the United States was:

A. Jefferson
B. Adams
C. Grant
D. Hoover
E. Nixon

In this situation, a student able to identify Grant as the only general on the list can correctly answer the item without making the discriminations seemingly required to answer the item. However, such a gross level of discrimination may be a desired learnining outcome goal for some students. This item could be made more difficult by changing the item to the following:

A general in the Civil War who became President of the United States was:

A. Washington
B. Jackson
C. Grant
D. Garfield
E. Eisenhower

Students responding to this revised item would have to make finer discriminations to choose the correct answer.

9. A test item should stand alone unless deliberately related to other items. If a valuable item relates to other valuable items, then all the necessary related items should be tied together so that they will not be incorrectly used as isolated items.
10. Each item should consist of clear, concise language and be definite and unambiguous in meaning. True-false items should avoid statements that are partly true and partly false or that contain qualifications or exceptions.
11. Trick questions are to be avoided, and negative questions should be avoided as much as possible.
12. Multiple-choice items should be written in direct question or incomplete statement form, whichever form most effectively presents the individual items.
13. The distractors should be independent and mutually exclusive. As far as possible, they should be arranged in numerical or logical order.
14. Essay questions should be restricted to measurements of objectives not readily measured by other item types.
15. Essay questions should be framed around specific problems, adequately delimited in scope. Each question should state clearly and accurately the desired extent and depth of the answer. It should state how many reasons, examples, arguments, and so forth are expected for the person to receive full credit for the item. The directions to "explain, outline, state, and compare" should indicate accurately the type of answer that will receive full credit.
16. Computational problems should state the degree of precision expected in the answer. The question should state clearly the extent to which approximations or fractional answers are to be rounded. The question should state clearly whether units (such as square metre or metres per second) are to be included by the student in the answer.

Reviewing the Mechanical Features of the Test

In addition to judging the adequacy of test items, school districts must also examine several mechanical features of the tests that they intend to use. The following checklist should be helpful in making such an examination:

- Item Format
  1. Are the items in the test numbered?
  2. Is each item complete on a page?
  3. Does the reference material for an item appear on the same page as the item or on a facing page?
  4. Are the item responses arranged to achieve both legibility and economy of space?
- Scoring Arrangements
  1. Has consideration been given to the practicability of a separate answer sheet?
  2. Are answers to be indicated by symbols rather than underlining or copying?
  3. Are answer spaces placed in a vertical column for easy scoring?
  4. If answer spaces are placed at the right of the page, is each answer space clearly associated with its corresponding item?
  5. Are the answer symbols to be used by the students free from possible ambiguity due to careless penmanship or deliberate hedging?
  6. Are the answer symbols to be used by the students free from confusion with the substance or content of the responses?
- Distribution of Correct Responses
  1. Are correct answers distributed so that the same answer does not appear for a long series of consecutive questions?
  2. Are correct answers distributed to avoid an excessive proportion of items in the test with the same answer?
  3. Is patterning of answers in a fixed, repeating sequence avoided?

- **Grouping and Arrangement of Items**
  1. Are items of the same type requiring the same directions grouped together in the test?
  2. Where juxtaposition of items of markedly dissimilar content is likely to cause confusion, are items grouped by content within each item type grouping?
  3. Are items generally arranged from easy to more difficult within the test as a whole and within each major subdivision of the test?
- **Directions for Answering Questions**
  1. Are simple, clear and specific directions given for each different item type in the test?
  2. Are directions clearly set off from the rest of the test by appropriate spacing or type style?
  3. Is effective use made of sample questions and answers to help clarify directions for unusual item types?
- **Correction for Chance**
  1. If deductions are to be made for wrong answers, are students so informed?
  2. If no deductions are to be made for wrong answers, are students advised to answer every question according to their best judgment?
- **Printing and Duplicating**
  1. Is the test free from annoying and confusing typographical errors?
  2. Is the legibility of the test satisfactory from the viewpoint of type size, adequacy of spacing and clarity of printing?
  3. Is the length of line neither too long nor too short for easy comprehension?

Special Care for Non-English Speaking Students

What will happen to students who speak little or no English when they are required to take minimum competency or proficiency tests in English?

Among the possible outcomes: many more such students will drop out of school or they may be channeled into remedial programs; the goal of language maintenance may be assigned a lower priority than the goal of passing the tests; schools having a small number of such students may not be able to prepare the students sufficiently to pass the in-English-only tests; and schools having a large number of such students may set proficiency or competency standards low to avoid negative criticism.

Do those things have to happen? No, says the California State Dept. of Education. It advises that proficiency or competency exams in English could prove beneficial to limited and non-English speaking students by providing a "minimal core of goals" for programs for such students and by providing continual, accurate feedback to students and their parents on student progress.

The department advises districts to:

- Use special care when planning assessment procedures for limited or non-English speaking students.
- Develop translated forms of the diagnostic instruments for use in "enroute assessments" (i.e., those leading up to the final in-English-only assessments).
- Incorporate skills, content and concepts of the proficiency (competency) examination into current bilingual and English as a second language (ESL) programs.
- Administer bilingual diagnostic tests to limited and non-English speaking students as early in their school career as possible. Administer such tests at subsequent intervals to measure student progress.
- Begin instruction as soon as possible in the areas of need, as indicated for individual students by the diagnostic tests.
- Use English vocabulary and language in the regular instructional program that is parallel to the language used in items in the proficiency test. Allow students to take parallel forms of the official proficiency tests in English and in their own language.
- Provide bilingual test proctors to help students understand key terms, phrases and words.

The department advises that students who demonstrate proficiency at or above the standards of the test in their own language will probably require at least a year's instruction in English to pass the test in English. Students who speak limited English, the department says, may not develop as rapidly in basic skills as they should while they are learning the new language. "Their needs are for remediation in their dominant language and continued instruction in English."

On the other hand, Spanish-surnamed students who speak little if any Spanish should be provided remediation of their skills in English — their primary language of instruction.

California legislation requires that students who fail proficiency tests must be provided a conference to discuss the results. The state education agency "strongly recommends" that parents who so desire be permitted to bring to the conference someone whose knowledge of education they trust. It notes, too, that the remediation plan should identify indicators of improvement in the deficient areas that both parents and students can observe at home. "Tutoring assistance should be provided, and the students should be permitted to retake the proficiency tests when they believe they are ready," the department says.

"Bilingual programs undoubtedly offer the best vehicle for limited or non-English speaking students to gain the skills and knowledge to pass proficiency tests and to be assured of leaving school with at least minimal functional skills," the department says.

How Much Will Minimum Competency Tests Cost?

Little attention has been paid to the increased costs resulting from legislation that mandates testing of minimum competencies and remediation of students who cannot pass competency requirements. More accurately, little attention has been paid by the public and by the media. School personnel are well aware that additional requirements and regulations always cost more money.

How much more is anyone's guess. Little is known about the actual and probable costs. One analysis of costs, prepared by Barry D. Anderson of Washington University, St. Louis, pinpoints costs in four areas: test development, test administration, bureaucratic expenses and costs for compensatory (remediation) programs.

Test development costs: Such costs are nil, Anderson says, if existing standardized tests fit legislative requirements and are adopted by the state or district. But many states and districts have opted to develop their own tests — which means items must be written or selected. They must be tested on small samples of students, then revised and put in final form. The cost per item is between $25 and $219 with the average about $100, says Anderson.

Total cost of development depends on the number of items selected and the number of grades in which measurement takes place. If a district, for example, decides to measure five criteria in reading and five in math (using 10 items to measure each criteria), the development costs could range from under $10,000 to over $60,000. That's assuming that measurement takes place one time each in elementary, junior and senior high schools. The estimates do not take into account the cost for developing alternative forms of the test, for making annual revisions of it, nor for making a highly sophisticated instrument, that is, one with more than a minimum number of items and one given more than pilot testing.

Test administration: The Denver school district reported to Anderson that its cost to administer a minimum competency test was 15¢ per pupil per administration. In statewide testing, the total cost for test administration depends on whether the state prints, mails, scores and reports the results itself or hires an outside contractor to do so. In the former case, figures obtained by Anderson indicate that the cost ranges from 50¢ to $1.55 per pupil. When a contractor is used, he says, the cost ranges from $1 to $13 per pupil. The larger figure is for a "secure" test, that is, one for which special precautions are taken to guarantee secrecy of test content. Anderson believes minimum competency tests should be secure, since the outcome could determine whether or not a student receives a diploma.

Bureaucratic expenses: Anderson reports mainly on bureaucratic expenses at the state level. But it is not inconceivable that new or modified bureaucratic structures at the local level could result to handle state mandated minimum competency requirements. When bureaucratic structures are added — at the state or local level — the cost could be high. Anderson says the costs of running a statewide testing program ranges from $65,000 to $945,000 annually.

Compensatory programs: This is the "great hidden cost in competency based programs," says Anderson. First, he notes, fairly large numbers of students — 20 to 50% — may fail competency examinations. Secondly, those who fail will probably be the urban poor. [Experience shows that trying to make education "work" for such students can be very costly and involve many "social" costs, e.g., providing free meals, work/study programs with pay, health costs, family assistance.] Bringing all students up to a mastery level, says Anderson, could mean spending more money (for smaller classes, materials, aides); spending more time on the targeted areas, such as the basic skills, at the expense of other areas of the curriculum; or, perhaps, making a political decision to lower the minimum competency level.

Total costs to districts will depend on many variables. Even estimates are difficult to make. As one illustration, however, Anderson notes that the cost to three Oregon districts in attempting to meet that state's competency graduation requirements ranged from $26,500 to $173,200.

Alternatives to Issuing a Single Diploma

A task force of the Hawaii Dept. of Education came up with seven alternatives to the practice of issuing one kind of certificate or diploma. It listed the advantages and disadvantages of each alternative, as follows:

Alternative I: Issue a single document, a diploma, indicating that all graduation requirements have been met, i.e., completion of grades 1-12, completion of credit requirements, mastery of minimum competencies.

Advantage: Provides for issuance of a meaningful diploma.

Disadvantage: No provision for students not meeting all graduation requirements.

Alternative II: Issue two different documents, a diploma and a certificate of completion. The *diploma* would have the same meaning as in Alternative I; the *certificate* would indicate completion of grades 1-12 and that the requirements of an approved individually prescribed program were completed. A transcript would list the competencies achieved.

Advantages: Accommodates many students; differentiates students.

Disadvantages: Does not enhance the significance of a diploma; negates upgrading of quality of education; may require many "approved" individually prescribed programs which in turn may be of dubious quality.

Alternative III: Issue three different documents, differentiated by title: *diploma* (it would have the same meaning as in Alternative I); *certificate of minimum competence* (it would indicate completion of grades 1-12, that some but not all of credit requirements had been met and that minimum competencies had been mastered); and a *certificate of completion* (it would indicate completion of grades 1-12 and that the requirements of an approved individually prescribed program had been met. A summary of the individual program completed and a listing of the competencies achieved would be included.)

Advantages: Allows for differentiation of levels which allows for accommodating "aptitude" levels; allows for clearer delineation of attainment criteria; allows for closer relationship of graduation requirements and curricular and course options; gives students and others a clearer knowledge of the standards each document represents.

Disadvantages: may have a detrimental effect, where only a diploma would be considered "good" by the public; "approved individually prescribed" programs would need to be defined in terms of levels of competence; differentiated levels might not provide an incentive to meet the diploma level; implementation would be difficult because of the "gray areas" between the three differentiated levels; legal contesting could be a probability.

Alternative IV: Issue a single document — called a diploma — coded with one of three codes — "standard," "minimum competency," or "completion of individually prescribed program." The document with a "standard" code would indicate completion of the same requirements as for a diploma as stated in Alternative III. Similarly, the "minimum competency" code would indicate completion of the same requirements as for a certificate of minimum competence, and the "completion of individually prescribed program" the same as for the certificate of completion in Alternative III. In other words, the only differences between Alternatives III and IV would be the issuance of one document instead of three and variance in what the document is called.

Advantages: Accommodates all levels of attainment with a single document; allows for closer relationship of graduation requirements and curricular and course options.

Disadvantages: "Works against the diploma concept"; allows diplomas with provisos; "approved individually prescribed" program would need to be defined in terms of levels of competencies; results in labeling; differentiated levels may not provide an incentive to meet the "standard" (diploma) level.

Alternative V: This alternative, like Alternative IV, provides for issuing a single coded document. The codes and the requirements are the same, but the document is called a certificate, rather than a diploma.

Advantages: The advantages are the same as indicated under Alternative IV.

Disadvantages: The diploma is a commonly accepted term, and not issuing a "diploma" may cause public misunderstanding; "approved individually prescribed" program would need to be defined in terms of levels of competence; results in labeling; differentiated levels may not provide an incentive to meet the "standard" (diploma) level.

Alternative VI: Issue a single document, a certificate/diploma, coded with one of four codes — "honors," "standard," "minimum competency," or "completion of individually prescribed program." The "honors" code would indicate completion of grades 1-12; completion of credit requirements; mastery of minimum competencies; completion of two credits of advanced placement, honors or other advanced course work; and rank in top 5% of class. The requirements for documents bearing any of the other three codes would be the same as indicated in Alternatives IV and V.

Advantages: Provides a single document which indicates completion of schooling for a wide range of students; every student would be able to meet one of the levels; provides recognition of students who have demonstrated mastery beyond the expected level; provides four separate codings which indicate level of requirements met without differentiating the document itself.

Disadvantages: Users may not understand the level of requirements met as indicated by coding; "approved individually prescribed" programs need to be defined in terms of levels of competencies; differentiated codes may not provide an incentive to meet a higher level; implementation is difficult because of gray areas between each level; legal contesting could be a probability.

Alternative VII: Issue four different documents, differentiated by title: "honors diploma," "diploma [standard]," "certificate of minimum competence," and "certificate of completion." The requirements for each would be the same as stipulated in Alternative VI.

Advantages: Provides four documents which indicate completion of schooling for a wide range of students; otherwise, advantages would be the same as indicated in Alternative VI.

Disadvantages: Provides separate documents, thus segregating or labeling students; otherwise, disadvantages are the same as indicated in Alternative VI.

Sample Competencies and Performance Indicators

Here are some sample competency statements and performance indicators used by various Oregon school districts. They are not meant to suggest an ideal level of difficulty. Note, too, that they are written at varying levels of generality.

COMPETENCIES	PERFORMANCE INDICATOR(S)
Read	
The student is able to:	
1. Apply basic reading skills to obtain information from reference materials.	1. Given a dictionary, the student will use it to find the correct meaning, spelling, pronunciation and use of 10 words selected from a newspaper. 2. Given a library card catalog, the student will use it to find information of use in three assigned areas. 3. Given an article (approximately 200 words in length) from the front page of a recent daily newspaper, the student will read it and answer to the teacher's satisfaction four out of five factual recall questions composed by the teacher.
2. Read and comprehend a job application form.	1. Given a job application form, the student will read it and provide the required information.
Write	
The student is able to:	
1. Write an acceptable autobiographical paragraph.	1. The student will write a legible autobiographical paragraph of 100 or more words with no errors in spelling, capitalization or punctuation. Reference materials will be available to students.
2. Write an acceptable business letter.	2. The student will correct all errors on a business letter provided for the student. Reference materials will be available.
Speak	
The student is able to:	
1. Report verbally his/her observations of an assigned event.	1. Given an assigned event, the student will verbally respond correctly to the questions from the instructor on observations of who, what, when, where and how as they apply to the event.
Analyze	
The student is able to:	
1. Distinguish between statements of fact and statements of opinion.	1. Given a particular analytic system and a selection of writing, the student will be able to identify which are statements of fact and which are statements of opinion.
2. Analyze the issues involved in deciding how to vote on an issue.	2. Given an issue which has appeared, or is scheduled to appear on the local ballot (e.g., fluoridation, school finance, control of atomic energy plants, etc.) the student will identify major pro and con arguments involved in the issue.
Compute	
The student is able to:	
1. Determine the consumption of gasoline on a miles per gallon basis.	1. Given three problems each showing the total gas consumption and miles traveled by a car, the student will compute the gasoline consumption to within one mile per gallon for each case.
2. Determine the added costs associated with time payment purchases.	2. Given the price of an item, a whole number annual interest rate and the length of a time payment contract, the student will determine the simple interest charges within 2% accuracy.
Use basic scientific and technological processes	
The student is able to:	
1. Understand and utilize data presented graphically.	1. Given a simple set of data, the student will present it using bar or straight line graphs as appropriate. 2. Given a graphic representation of a set of data, the student will obtain information from the graph to answer questions.
Develop and maintain a healthy mind and body	
The student is able to:	
1. Demonstrate ability to participate in two lifetime leisure activities.	1. The student will demonstrate healthy leisure time prerequisites by either performing fundamentals of

COMPETENCIES	PERFORMANCE INDICATOR(S)
	two lifetime individual or two-person recreational sports, OR the student must meet one of the above sports requirements *and* develop a fine arts ability to a degree that basic fundamentals in that fine arts area are recognized as satisfied by a fine arts teacher.
Be an informed citizen in the community, state and nation	
The student is able to:	
1. Participate constructively as a citizen of his/her community and state.	1. Given a hypothetical situation, the student will identify a minimum of three ways a citizen can participate in the decisions made by elected public officials.
Function within an occupation or continue education leading to a career	
The student is able to:	
1. Plan for proper behavior and attitudes necessary to keep a job.	1. Interview two prospective employers and record the factors which those employers list as necessary for continued employment.

Source: *Graduation Requirements Guidelines, Revised;* Oregon Dept. of Education, Salem.

Tips on Managing and Operating a Minimum Competency Program

The following plan, developed by the California State Dept. of Education, provides guidelines for school administrators on developing and implementing a system of assessing minimum competencies or proficiencies:

Major Management Activities for a District

1. Form a task force to coordinate development and implementation of procedures for assessing minimum competency or proficiency procedures.
2. Conduct informational meetings with principals and teachers.
3. Conduct informational meetings with parents.
4. Conduct informational meetings with students.
5. Ask school board to invite key community representatives, principals, teachers and students to serve on ad hoc committee.
6. Provide orientation for the ad hoc committee.
7. Designate principals and teachers to prepare an analysis of present graduation requirements, including alternative means of instruction.
8. Have ad hoc committee review present graduation requirements, including alternaive means of instruction.
9. Designate staff to prepare pilot version of parent, student and staff questionnaire on graduation requirements (possibly including questions regarding alternative means of instruction).
10. Have ad hoc committee complete pilot version of questionnaire on graduation requirements and instructional alternatives and recommend modifications.
11. Designate staff to prepare final version of questionnaire on graduation requirements and instructional alternatives.
12. Give questionnaire on graduation requirements to sample of students, parents and community members (stratified random sample would be preferred).
13. Compile and analyze data.
14. Designate staff to develop list of proficiencies and recommend modifications.
15. Have ad hoc committee review list of proficiencies and recommend modifications.
16. Designate staff to prepare preliminary estimate of feasible methods for making an assessment of proposed student proficiencies.
17. Send to superintendent for further review or modification a modified list of the proficiencies and proposed assessment instruments and procedures.
18. Designate staff to develop assessment instruments and procedures for each identified proficiency.
19. Have proficiency assessment instruments and procedures field tested.
20. Based on field test data, refine and modify assessment instruments and procedures (and give second field test if necessary).
21. Have the superintendent and his or her designee make final modification of proficiencies if warranted by field test data.
22. Send final list of proficiencies to board for public hearing.
23. Have governing board adopt list of proficiencies.

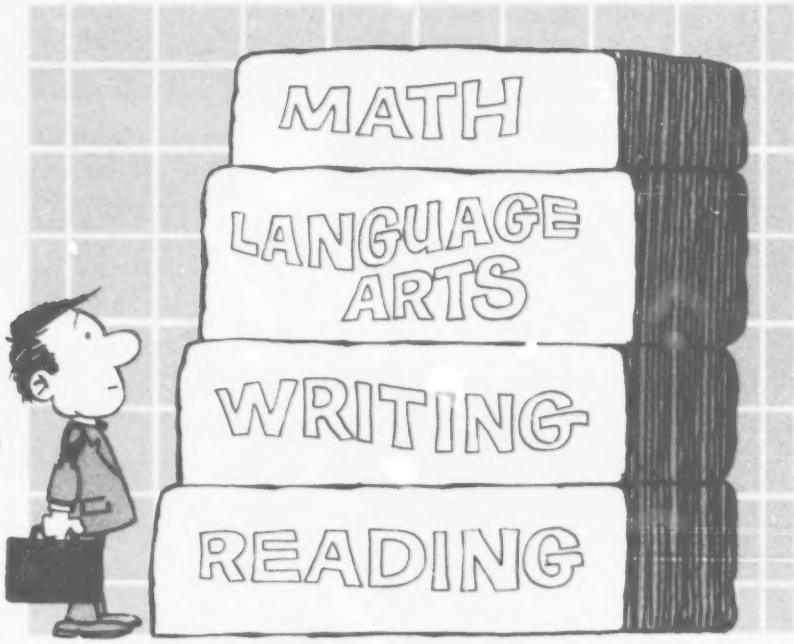
24. Designate staff to make recommendations on pupil proficiency performance standards and differential standards (for special students) to the superintendent.
25. Have superintendent and his or her designee review recommended performance standards.
26. Send recommended performance standards to governing board for public hearing.
27. Have governing board adopt prescribed proficiency standards, including differential standards.

Major Management Activities for the School

28. Compile and distribute student handbook on course of study and proficiency requirements.
29. Conduct informational meeting for public hearing on adopted proficiencies and alternative means of instruction.
30. Conduct departmental informational meetings for teachers and counselors on adopted proficiencies and alternative means for students to achieve required levels of proficiency in basic skills.
31. Conduct orientation on new requirements and programs for teachers and counselors.
32. Have counselors or designated teachers conduct small group orientation sessions for students.
33. Conduct individual conferences for students, as needed.
34. Implement instructional program and assess student proficiencies as required.
35. Interpret and disseminate results of assessment.
36. Arrange and conduct student conferences. (Required by California legislation).
37. Define, implement, monitor and evaluate instructional program and individualized program of basic skills instruction, as necessary.
38. Repeat cycles of assessment-conferencing-instruction until minimal proficiency in basic skills is established.
39. Conduct an updated informational session for governing board and the public.
40. Repeat appropriate portions of process.

CHAPTER X

What Are the Basics?



What's basic and what's minimum for students to learn? Some professional education groups are trying to answer those questions. They've decided that it's better to be a "mover and shaker" in the competency movement than it is to be a "movee and shakee." The result is that definitions and clear guidelines on "basics" and "competency" are emerging.

Following is available guidance from professional organizations that may help in determining basics and in setting competency standards.

Mathematics

One professional group that is making an exemplary effort to clearly define "the basics" and "minimum skills" is the National Council of Supervisors of Mathematics (NCSM). Its position paper on "Basic Mathematical Skills," developed under a contract with the National Institute of Education, has been widely circulated in the mathematics community.

The NCSM statement is being used by the Educational Testing Service as a framework for the development and selection of test items for a basic skills testing program, according to Ross Taylor, chairman of the task force which drew up the position paper. Publishers also are using the position paper as guidelines for development of new basic skills materials. "At this time, the position paper is having more influence on basic mathematical skills than any other document," says Taylor, who is a mathematics consultant for the Minneapolis Public Schools.

The position paper clearly debunks the notion that computation skills alone comprise basic mathematics skills. It says: "In isolation, computation skills contribute little to one's ability to participate in mainstream society." When combined with other skill areas, however, computational skills give the learner basic mathematical ability, according to NCSM.

The position paper neither recommends nor condemns minimal mathematics competencies for high school graduation. However, it does urge school boards and state legislatures to use the 10 basic skills areas it identifies as guidelines in the establishment of minimum essential requirements. At the same time, it warns that if mathematics requirements are set too low and mathematical skills are too narrowly defined, "the result could be a sterile mathematics program concentrating exclusively on learning of low level mathematical skills." If, on the other hand, mathematics requirements are set inordinately high, "then a significant number of students may not be able to graduate."

The question of whether minimums should be established for promotion from one grade level to the next is addressed by Taylor. He says the issue is "complex." "Such requirements could be used to punish students who do not achieve or teachers of students who do not achieve." Looking on the bright side, he says such requirements could be used to identify learning needs and to provide help to meet those needs.

Here, then, is a synopsis of the 10 basic skill areas in mathematics adopted by NCSM. (The complete text is available from Taylor; his address is given at the end of this section.) The order in which the skills are listed does not

Basic Questions on Basic Math Skills

Some frequently asked questions on the subject of basic mathematics skills are answered in the position paper. Here are examples:

Q. How should basic skills in mathematics be taught?

A. Options should be provided to meet students' differing learning styles. Drill and practice is one option, but it may be overemphasized in the current "back to basics" movement. Other options to bring about learning and to create interest and motivation in students could include: learning centers, contracts, tutorial sessions, individual and small group projects, games, simulations and community-based activities. To help students fully understand basic mathematical concepts, teachers should use the full range of available activities and materials.

Q. When should basic mathematical skills be taught?

A. The learning of basic mathematical skills is a continuing process. It should extend through all of the years a student is in school. Schools should avoid a tendency to emphasize computation at the elementary level, while neglecting the other nine skill areas.

Q. Will the 10 basic skills areas recommended by the NCSM task force remain static?

A. No. As society changes, our ideas about which skills are basic also will change. To illustrate: today, students should learn to measure in both the customary and metric systems. But in the future the significance of the customary system will be mostly historical. In addition, there will be increasing emphasis on when and how to use handheld calculators and other electronic devices in mathematics.

Q. What kinds of employment opportunities can youth expect if they attain basic mathematical skills?

A. Students who attain *limited skills*, primarily computation, will have limited opportunities with unemployment likely. Their potential will generally be limited to low-level jobs. Those who attain NCSM's 10 *basic skills* will have two doors open to them: employment opportunities and future educational opportunities. Students whose mathematical skills *go beyond the 10 basic skills areas* defined by NCSM are potential leaders. "Employment and educational opportunities will continue to increase as mathematical skills continue to grow."

For more information on the work of the NCSM task force, contact Ross Taylor, Minneapolis Public Schools, 807 Broadway, N.E., Minneapolis, Minn. 55413.

indicate either a priority of importance or a sequence for teaching and learning.

- **Problem solving:** Students should be able to solve problems in situations which are new to them.
- **Applying mathematics to everyday situations:** Students should be able to use mathematics to deal with situations they face daily in an ever-changing world.
- **Alertness to reasonableness of results:** Students should learn to check their answers to make sure they're "in the ball park."
- **Estimation and approximation:** Students should learn to estimate quantity, length, distance, weight.
- **Appropriate computational skills:** Students should be able to use the four basic operations with whole numbers and decimals, and they should be able to do computations with simple fractions and percents.
- **Geometry:** Students should know basic properties of simple geometric figures.
- **Measurement:** Students should be able to measure in both the metric and customary systems.
- **Tables, charts and graphs:** Students should be able to read and make simple tables, charts and graphs.
- **Using mathematics to predict:** Students should know how mathematics is used to find the liklihood of future events.
- **Computer literacy:** Students should know about the many uses of computers in society, and they should be aware of what computers can do and what they cannot do.

Language Arts

Eight language arts specialists at the college level were brought together in 1976 by the American College Testing Program to specify the skills *"essential to probable success in writing experiences in colleges."*
Following are the points they agreed on:

1. Critical perception, which involves "volition" and emotion as well as "intellection," is the language skill most necessary for success in educational experience.

2. The content matter of how language works — socially, intellectually, psychologically — is of chief importance in the language arts curriculum.

3. All language activities must be recognized in terms of purpose, audience, intention and occasion.

4. Thinking, writing and reading are critically interrelated. Writing forces one to think at the deepest level that the language offers, provides the reflective experience and demands precision. It bolsters critical reading skills for a public that may, in fact, have minimal need for writing but still has to deal with newspapers, magazines, political speeches and the like.

5. It is no longer believed that usage/mechanics can indicate the range of language proficiency. As one feature of language factored out to indicate the whole, it has ceased

to relate well with that whole, particularly as social backgrounds have shifted.

When asked to specify "ideal" content for the language arts curriculum at the high school level, the specialists couldn't agree on the most important area. Given top ranking by some of the specialists were "speaking/listening" skills, including recitation, public speaking, oral communication, debate, note-taking and group interaction. Other specialists gave top ranking to the "nature and history of language and its use in social contexts."

All participants agreed that writing, including editing and composing, was the second most important area of stress for high school language arts programs. Usage/mechanics, including punctuation, grammar and sentence structure, was assigned to last place by all participants.

For more information: *What's Really Basic in the Language Arts*? is available for $1 from The American College Testing Program, P.O. Box 168, Iowa City, Iowa 52340.

Writing

A "preliminary specification" of competence in English — with emphasis on writing — was developed by participants to the Urbana Conference on Competency in English, held by the School of Education, University of Illinois, Urbana.

The conferees shifted the responsibility for the development of competencies from students to the school. They said it is reasonable to expect schools to provide students with the capability to:

- Follow a set of written instructions which require students to write, e.g., to fill in a form.
- Produce written communcation that can inform a reader.
- Produce written communication that might persuade a reasonable person.
- Produce written communication that adheres to the conventions of spelling, punctuation and usage.
- Demonstrate the ability to discern if not to produce some of the major persuasive uses of language, e.g., innuendo, flattery, sarcasm.

The conferees also agreed on three principles to guide the development of competency statements on writing, as follows:

1. Competency in writing should be demonstrated through actual writing performance, not through the use of multiple choice tests.
2. Competency in writing should be demonstrated in a variety of contexts. Although performance in all possible contexts is unwarranted, assessment of competency should not be limited to a single context, e.g., the writing of a business letter under rigid constraints of time.
3. Competency in adhering to conventions, e.g., the placement of a return address, should not depend on knowing a particular set of conventions. It is better for the student to be able to follow general conventions, or to follow specific conventions when they are presented as an example.

Based on those principles, the conferees recommended seven specifications for a test of competency in writing:

1. A measure of the ability to follow a set of written directions for writing.
2. A measure of the ability to produce a written report (e.g., a set of directions or an order based on data supplied the student) to an unfamiliar audience, e.g., an order clerk.
3. A measure of the ability to produce a written generalization supported by evidence (based on data provided the student) to a familiar but distant audience, e.g., a group of teachers or townspeople.
4. A measure of the ability to produce written persuasion to a familiar audience, e.g., a school principal.
5. A measure of editing skills with particular emphasis on sentence completeness; agreement of tenses, pronouns, subject and object; punctuation and capitalization.
6. A measure of spelling based on the oral presentation of words.
7. A measure of the ability to determine the purpose, audience and constraints of a writing situation and then to determine the appropriate uses of language, particularly irony, connotation and metaphor.

For more information, contact Alan C. Purves, Curriculum Laboratory, School of Education, 1210 W. Springfield Ave., Urbana, Ill. 61801.

Reading

There was no national consensus statement on the "basics" of reading at the time this report was written.

However, concerted efforts are under way to establish phonics as the primary concern of reading instruction as a result of the "back of basics" movement.

This approach is not favored by leaders in the reading field. For example, the International Reading Association (IRA) adopted the following policy statement:

> "Word analysis skills, including phonics, are critical to learning to read. However, IRA cannot support the position that reading instruction is defined primarily in terms of such skills. Effective instruction must account for word analysis as a means to the larger end goal of meaning and application.
>
> "IRA also strongly encourages emphasis on instructional areas such as the development of comprehension abilities, high quality literature experiences, positive attitudes toward self and reading and content area literacy skills.
>
> "Instructional programs across the grade levels should incorporate word analysis skills and instructional areas such as those above in balance to meet the instructional and recreational reading needs of the individual student."

Are 'back to basics' schools the answer?

An Update on Fundamental Schools

The public generally became aware of a "back to basics" movement in education in the early to mid 1970s. The formation of several "fundamental" or "traditional" schools in California attracted national attention. As the publicity grew, so did the number of parents, school board members and other citizens demanding that schools "go back to the basics," stressing the three R's, discipline and the values of earlier days.

Fundamental schools are now overshadowed, however, by the much larger competency movement, propelled by legislative mandates.

The number of districts involved in the fundamental school movement appears small. Only 31 of the more than 1,500 districts responding to the **Critical Issues** survey reported the formation of fundamental schools. The Council for Basic Education, which unofficially monitors the movement, counted 24 districts with fundamental schools in February 1977.

The fundamental schools reported in the **Critical Issues** survey serve from 100 to 500 students, usually in grades K-6 or K-8. Almost all of the schools have been started since 1975. Fifteen of the respondents to the **Critical Issues** survey said they planned to expand the number of fundamental schools or the number of students attending them; 12 said expansion was not planned; four were uncertain.

The Philadelphia School District has 18 fundamental schools serving approximately 10,000 students in grades 1-8, and expansion is planned. In three other city districts, however, one fundamental school is in operation and, in each case, expansion is not planned. A representative of one city district acknowledged that the formation of one fundamental school was due to "the influence of one community person." He admitted, however, that expansion of the concept was planned.

How do the schools get started? Generally, districts initiate them due to pressure or requests from parents, members of the board of education or other community members. Some of them have been started at the request of parents following an announcement that the district would desegregate. More recently, districts themselves have initiated structured, traditional schools in the wake of court orders to desegregate. Then, they are used as magnet schools. They are open to any students in the district, but the intention is to achieve racial balance by attracting students to voluntarily enroll in a school other than their neighborhood school.

The Los Angeles City Schools, for example, announced that it would open its first fundamental school — its third magnet school — in Feburary 1978. The district offers free transportation to the school from three areas of the city where most minority students live. Students from other parts of the city may enroll, but they must provide their own transportation. The school's program will stress "reading, writing and arithmetic, old fashioned discipline, good grooming and lots of homework." The board approved additional funds for the school to reduce class size and to provide specialized instructional materials.

Other reasons for the establishment of fundamental schools are varied. Some parent groups have called for their formation, charging that schools are too permissive, too unstructured, too innovative and too different from the kind of school they attended. In several districts, the schools have been started to even the effects of declining enrollment.

Some of the schools are "not very different" from other schools in the district serving the same grade levels, according to administrators responding to the **Critical Issues** survey. Some districts have not encouraged the formation of such schools for that reason. By their very nature, however, fundamental schools usually encourage and receive more support from parents.

Fundamental or traditional schools generally are described in terms of the atmosphere, the outcomes and what's expected of students, teachers and parents. They emphasize the "basics." Generally, that means that students spend as much or more time on the three R's than their counterparts in other classrooms. In one fundamental school, for example, teachers were required to spend twice as much time on the three R's as on other parts of the curriculum. Phonics is often stressed in the teaching of reading; drill and practice often are required; and both students and teachers are held accountable for seeing that assigned work is completed on schedule. Homework is required. Sometimes parents must sign a contract stipulating that they will be responsible for providing a place and a time to do homework.

Other characteristics: Enrollment is voluntary, although parents often must agree to policies on discipline, homework and dress codes before their child will be enrolled. Student placement and promotion often are based on demonstrated achievement in an attempt to do away with "social" promotions. The classrooms are usually self-contained, not open space. The cost for educating a child generally is at the district level.

Discipline is stressed. Corporal punishment is sometimes used. Frequently, strict codes of conduct are in effect. Patriotism is often emphasized, both in actions such as flag-raising ceremonies and in lessons such as memorizing the Bill of Rights or the Preamble to the Constitution. Dress codes for teachers as well as for students are usually required.

Since many of the schools are comparatively new, no complete evaluation exists. The schools frequently claim higher test scores for their students than for peers in other schools. In addition, they say students like the structured classrooms because they "learn more" and that parent support and involvement in the schools remains high.

The Pros

Various proponents cite these factors in support of the fundamental schools:

- The schools positively influence the regular schools in the community.
- "There's an air of courtesy and a low noise level, as well as less frantic children,"
- In several districts, the flow of students out of the district or into private schools has been reversed.
- The schools give some parents an alternative they want: emphasis on the three R's and strict discipline.

The Cons

Various opponents say:

- "Fundamental education is as much concerned with shaping children in a particular fashion as it is with what they should be learning. It is a limited, narrow, even dangerous movement. Discipline can be purchased at too high a cost."
- "The schools produce 'elitist' attitudes and fail to recognize that many problems confronting schools are societal in nature."
- "We are in danger of being driven backward, instead of forward, for our educational models."
- "The schools are reactionary, repressive, overly rigid. They tend to become bastions of political reaction."
- "The fundamental school operates like a private school within the public school system."
- Some of the schools do not provide transportation, shutting out children of the poor.
- "The fundamental school should not detract through excessive publicity from the job being done by teachers in other schools. But they do. We need to inform the public that education is alive and well in other schools."
- "Schools have not stopped teaching the basics, but they may 'invent' programs to meet public pressure and criticism and become less concerned with other important aspects of learning."
- "Fundamental schools will teach children to memorize, but not to think."

Probably the most worrisome aspect for administrators is when the schools are allowed to become political footballs in the community. When that happens, they create an aura of resentment among teachers, parents and administrators.

For that reason and others, various administrators advise that districts should document the need for establishment of fundamental schools as well as possible. "If such a school is set up as the only alternative to the district's regular schools, then you are probably sending out too strong a signal," says Paul B. Salmon, executive director of AASA.

Ramon Cortinnes, superintendent of the Pasadena, Calif., schools — which includes five fundamental schools — advises adminsitrators to find out what is happening locally to bring about the demand for a fundamental school. "Are parents demanding a fundamental school because the regular schools are not doing their job? Are parents trying to get their children out of schools located in allegedly unsafe areas? Are parents seeking to isolate their children with those of families holding the same values?"

Cortinnes suggests that adminstrators and boards try to answer this question: Is the establishment of a fundamental school the answer to the specific problems we have or can they be better handled by taking a look at and perhaps rethinking what we're doing in the regular schools?

Cortinnes says the fundamental school is a viable alternative for some parents and students. He insists, however, that any valuable lessons learned in any alternative school should be integrated into the regular schools so that all students may benefit from them.

What Are the Basics of a Good Reading Program?

An Interview with Gilbert Schiffman

Gilbert B. Schiffman, director of the national Right to Read program since January 1977, is experienced as a professor of education, director of instruction for a large school system and state supervisor of reading.

Q. How severe is the reading problem in the U.S.?

A. Unfortunately, most of the studies that try to identify severity of reading difficulty are inconsistent. Some say there are 18.6 million illiterate adults in the U.S.; others say 23 million. Probably one of the most effective instruments today is the National Assessment of Educational Progress which indicates 12% of 17-year-olds are illiterate.

Q. On the national level, what do you think is the main problem preventing us from finding a solution to the reading dilemma?

A. I believe we have the expertise to solve the reading problem. I think our problem is the delivery system. We have so many agencies spending considerable time guarding their own turf and not working effectively together. If we are going to resolve the difficulty, we must develop interagency cooperation between all agencies that are concerned with this problem and start working effectively together.

Q. What makes for a successful reading program at the local level?

A. I think we have discovered what is successful in reading programs. The major factor is the teacher. Every study that I've seen and that we've read or taken apart clearly indicates that it's not the materials or the kits or the gadgets that make the difference. It's the quality and training of the teacher. So, for the successful reading program, the No. 1 prerequisites are top-notch teachers and top-notch teacher education.

Q. Are the remedial reading programs being offered in schools helping to solve students' reading problems?

A. That's a difficult question to generalize about. However, I think many of the present programs where we pull children out of a regular classroom, give them 30 or 40 minutes of remedial help and then return them to the classroom without interacting with the classroom teacher have not been at all successful. When we find the remedial reading program integrating all professionals at the school level, then we find remedial programs that are very successful.

Q. What are the "basics" of a good reading program?

A. There are five: (1) The local school — and this can be a local school building, an intermediate unit or a state — must have some idea of what it wants to teach. Maybe you like the words "skills" or "behavioral objectives." I don't care what it's called, but a local school — whether a classroom, a school building or an intermediate unit — must know what it wants to teach. (2) We must have some means of assessing where students are in relation to what we want to teach. This is important for secondary schools as well as elementary schools. I recognize that many secondary teachers have 155 or 175 students, but there has to be some indication as far as each teacher is concerned as to what they want to teach and where students are in relationship to this. (3) There must be a proper teacher education program in our local schools. If we recognize that one of the most important ingredients is top-notch teachers, we must make sure we have proper inservice, retraining or educational programs for teachers. There are lots of ways this can be done by the local school. (4) We must make sure we have the right materials. In many cases the materials look so good that we have to raise the question, "Are they really as good as they look?" . . . I'm more and more convinced that local teachers have to be involved in evaluating and selecting materials. (5) This is crucial. We must ask: Do we have the best organization for our local school to meet the individual needs of students. Is the best organization for us team teaching, departmentalization, learning centers. When we have all these ingredients, then we have the basics for a successful reading program.